**RFI SPECIFICATION**

COVER PAGE (SUMMARY)

**BIDDERS MUST SUBMIT ANNEXURE 1 TOGETHER WITH THE MAIN BID DOCUMENT**

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| --- | --- |
| **RFI No:** | RFI 5903-2025 |
| **Description** | Request for Information (RFI) for eHealth Systems, System Take-on and Implementation, Maintenance and Support Services. |
| **Publication Date** | 07 February 2025 |
| **Virtual Vendor Briefing Session** | A Non-Compulsory Virtual Briefing Session will be held as follows:  Date: 14 February 2025  Time: 11h00 am (South African Time)  Venue: Online (Teams)  Link: [**Join Meeting Now**](https://teams.microsoft.com/meet/32123239820?p=KWDNIMZ0QfCN2g38BG)  Meeting ID: 321 232 398 20  Passcode: Fe9sZ3sd |
| **Closing Date for questions / queries** | 21 February 2025 |
| **Proposal Submission Address** | Proposals will be accepted physically at the following address: Tender Office, 459 Tsitsa Street, Erasmuskloof, Pretoria, 0105. |
| **RFI Closing Details and Address** | **Date: 03 March 2025**  **Time: 11h00 am (South African Time)**  **Physical address: Tender Office, 459 Tsitsa Street, Erasmuskloof, Pretoria, 0105.** |
| **RFI Validity Period** | 200 days from the Closing Date |

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# Introduction

1. The State Information Technology Agency (SITA) is a company with limited liability duly incorporated in accordance with the Companies Act of the Republic of South Africa (RSA), company registration number 1999/001899/30, and in terms of the State Information Technology Agency Act No. 88 of 1998 [Hereinafter referred to as the “SITA Act”] as amended by Act 38 of 2002.
2. SITA is mandated in accordance with section 7 of the Act to render Information and Communication Technology (ICT) services to government departments, and to act as the procurement agency of the Government.
3. SITA herewith invites bidders to provide information on suitable eHealth systems with price estimates.

# Purpose

The purpose of this RFI is to gather relevant information from industry to enable SITA to:

1. Identify prospective bidders who have the capability to supply, implement, maintain and support a suitable eHealth system;
2. Augment the specification that can be used to acquire such a system in a subsequent competitive bidding process; and
3. Obtain an estimate amount that such suitable eHealth system and related services will cost.

# Background

SITA was tasked by the Department of Defence (DOD) to acquire an eHealth system for the South African Military Health Service (SAMHS) that will replace their current legacy Health Informatics (HI) System.

The SAMHS is a large and complex organisation with legacy systems that can no longer support the expanding and dynamic nature of healthcare, military healthcare and technology. The legacy systems do not have the requisite capabilities for improved healthcare, health intelligence, healthcare information management and service requirements for an integrated healthcare delivery that seamlessly acquire, store and disseminate health information from a static facility and/or a mobile healthcare facility to a centralised eHealth platform. A few example areas where the legacy HI systems lack modern enablement are user experience, remote access, interoperability with main medical equipment and point of care (PoC) devices, interoperability with public and private healthcare providers, workflow, clinical decision support (CDS) and notifications.

The new eHealth system must be customisable to accommodate SAMHS’s unique requirements such as medical classifications, combat readiness and disaster management. It must further be possible to enhance the system with subsequent requirements that will be identified during and after implementation.

# Current environment

The Table below reflects the current DOD HI system information. The system is mainly hosted on mainframe with some systems hosted on Hyperconverged Infrastructure (HCI) / X86 platform. The system is accessible from the isolated DOD network only.

Table 1 – Current HI system information

|  |  |
| --- | --- |
| **Current Health Informatics system** | |
| **Mainframe component** | |
| Application platform: | IBM z16 |
| Operating system: | z/OS V2.2 (with possible upgrade to V2.3) |
| Database management system: | Datacom V15 |
| Online transaction processing: | CICS Transaction Server Version 5.5 |
| User interface software: | Attachmate |
| Development language: | IDEAL V15; Metacobol V1.2 |
| Integration software: | IBM MQ / IBM WebSphere MQ Version 8 |
| Network: | Isolated DOD network |
| Functionality: | 40 integrated sub-systems:  Access Control; Alphabetical Administration codes; Ancillary Health and Speech Therapy and Audiology; Audit Trail; Clinical Codes; Clinical Imaging; Clinical Procedures; Theatre Scheduling; Community Nursing Care; Dental Laboratory Services; Dental Services; Deployed Health; Documentation Maintenance; File Maintenance; Health Codes; Health Info; Health Information Management; Healthcare Item Administration; Hospital Administration; Hospital Management; Hospital Print Menu; Infection Control; Integrated Patient Health Record; Laboratory Test Results; Medical Classifications; Medical Debtors; Microfilm Index / Scanning system; Migration (and retrieval of migrated data); Outpatient Consultation; Patient Identification; Scheduling system; Pharmacy; Print Facility; Psychology and Social Questionnaires; Special Authorisations; Support functions; Invoice Administration; IMS Archived Data Requests; Special Reports. |
| Interfaces | Interfaces with other DOD systems for personnel, logistics including order administration and National Codification System, Financial Management System, organisation structure, access control, management information and Laboratory Information Management System (third party product). |
| Data provision | Interfaces with departments external to the DOD for Regular Force Medical Continuation Fund, Department of Military Veterans and other Government departments. |
| **Distributed platform component** | |
| Application platform: | HCI, X86 Servers |
| User interface software: | Browser; Attachmate |
| Operating system (Desktops): | Windows – various versions (NT, 2000, 2003, 2007, 2010, 2011) |
| Operating system (Servers): | Windows 2012, 2016 |
| Development languages: | Java; VB.net; C# |
| Database management system: | Oracle, SQLite |
| Integration software: | MQ Client (Message Queue) |
| Network: | Isolated DOD network |
| Functionality: | Several individual systems addressing the following functionality:  Response Questionnaire Analysis / Comprehensive Health Assessments; Deployed Health System – Master server and Hand-Held Device; Digital Scanning: Retrieval application and Scanning and QA application; Laboratory system; LIMS Transmitter Application; Nursing College Administration; Duty Scheduling system; Dietary Manager; Telehealth System; Computer-based training (CBT) modules; Statistical Package for Social Sciences (SPSS); ICD10 Browser; Radiology Information System Picture Archive Communication System (RIS/PACS), Healthcare Provider (HCP) Quick Capture. |
| Interfaces: | Some applications are stand-alone. Other applications interface with DOD systems for access control, codes, patient identification, medical classifications and support functions. |

Current HI system statistics in terms of volumes are provided in the table below.

Table 2 – Current HI system volume information

| **Item** | **Description** | **Quantity** | **Records** | **Data fields** | **Storage volume** |
| --- | --- | --- | --- | --- | --- |
| **Database(s)** | Datacom Production | 59 | 561 978 151 | 20 125 | 246 GB |
| Oracle Production | 11 | 764 021 154 | 2 359 136 | 5098 GB |
| **Average transactions per month** | Mainframe systems | 8 045 970 |  |  |  |
| **Active patients** | Patients | ± 200 000 |  |  |  |
| **Active users** | Providers | ± 2000 |  |  |  |

# Target environment

## Introduction

The new eHealth system[[1]](#footnote-1) and services must address all requirements provided in this document. The system must be hosted on the Government Private Cloud Ecosystem (GPCE) / Cloud Foundation Infrastructure (CFI). It must be accessible from anywhere (including from outside RSA borders and rural RSA areas), using any authorised device, including mobile devices. The system will be deployed on the SITA core next-generation network (NGN).

## Target system and services requirement scope

### eHealth system

The SAMHS eHealth requirements are expressed in terms of functional and non-functional requirements[[2]](#footnote-2). Functional requirements are expressed in terms of four interrelated function groups, marked A, B, C and D in the figure below.

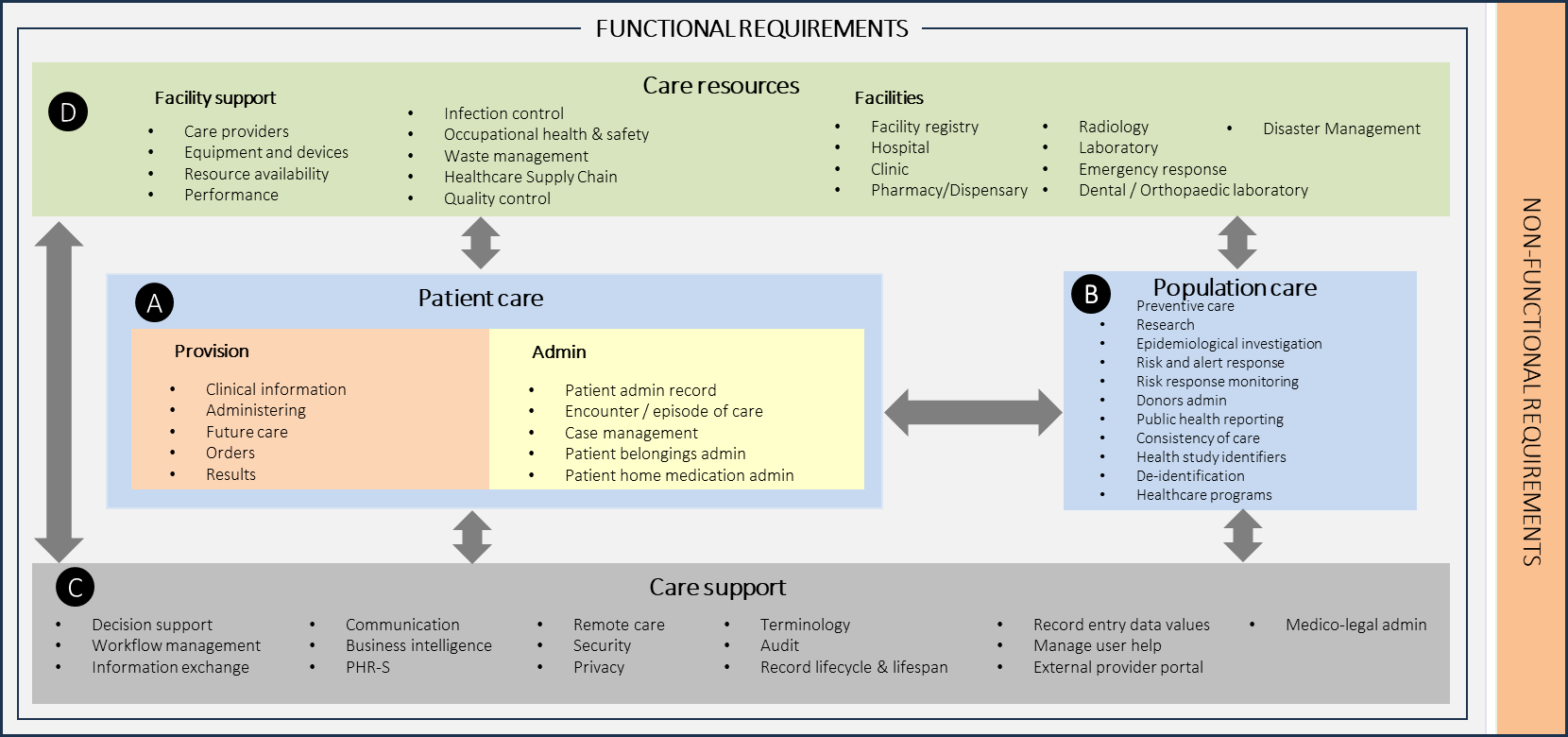


Figure 1 –eHealth system requirement components

Function grouping descriptions and interactions are provided in the sections that follow, to give context to the functional requirements.

#### Functional requirements

##### Group A: Patient Care

Patient care (A) renders and administrates care to specific individual patients. It consists of two high-level functions, namely patient care provision (A) and patient care admin (A), which operate in tandem and collectively generate all patient-specific information.

1. Patient care provision (A) pertains to all clinical aspects of patient care (A). It performs two inseparable, concurrent activities, which are: the actual rendering of care by a provider; and the generation of clinical information associated with that care. Patient care provision (A) functions occur within an encounter/episode of care (which is a function of patient care admin [A]). In other words, an encounter/episode of care provides the administrative framework within which the clinical functions (of patient care provision [A]) are performed.
2. Patient care admin (A) pertains to all administrative aspects of patient care (A).
3. Patient care (A) consists of *common functions*, i.e., functions that are generic and can therefore be shared by other functions. More specifically, patient care (A) functions are shared / used by the functions of facilities (D).
4. Patient care (A) is rendered via facilities (D) (hospital, clinic, pharmacy/dispensary, radiology, laboratory, and emergency response), which provide context (where, when, by whom, etc.) to *patient care*. In other words, each facility makes use of (invokes) *patient care* functions.
5. Patient care (A)is supported by care support (C) functions, which can be said to be embedded in patient care. Care support (C)functions greatly enhance patient care (A)by means of functions such as *decision support, workflow, security, etc.* Technically speaking, patient care (A) invokescare support (C) functions when needed.
6. The clinical and admin information created by *patient care (A)* is used by *population care (B)* in several of its roles of ‘big picture’ surveillance. This enables *population care* to provide crucial feedback to *patient care* regarding patients (groups or individuals) who, for example, are at medical risk or need preventive or follow-up care.

##### Group B: Population care

In contrast with direct patient-specific care (as rendered in patient care [A]), population care (B) deals with groups of people. Individuals within such a group have something in common, such as residence in a specific area, medical condition, age group, care provider, etc.

1. The objectives of population care (B) are disease prevention and control as well as well-being and performance optimisation interventions to assist the population to perform optimally and as far as possible minimise various mental ailments such as burnout, Post Traumatic Stress Disorder (PTSD), etc.
2. Population care (B) essentially performs ‘big picture’ surveillance of SAMHS’ patient population, using mostly patient care (A) information as input. It generally aggregates this information for statistical and analysis purposes. However, it can also provide crucial feedback to patient care (A) regarding specific patients (groups or individuals) who, for example, are at medical risk or need preventive or follow-up care.
3. In addition to care-related clinical information, population care (B) requires information about the capacity and performance of facilities and other clinical resources, which is provided by several care resources (D) functions.
4. Population care (B) is supported by care support (C) functions such as decision support, workflow, information exchange, and security. Technically speaking, population care (B) invokes care support (C) functions when needed.
5. Population care (B) includes functions that provide input to systems for medical research, public health promotion, and improving quality of care at a multi-patient level.

##### Group C: Care support

Care support (C) provides support to patient care (A), population care (B), and care resources (D) functions, and may be said to be embedded in these functions and ‘invisible’ to users. Care support (C) enhances these functions by means of eg, decision support, workflow, security, etc. Without care support (C), the afore-mentioned functions would mostly still exist, but on a far less sophisticated level.

1. Care support (C) consists of common functions, i.e. functions that are generic and can therefore be shared by other functions. Care support (C) functions can be shared/used/invoked by any function.
2. When invoked by patient care (A), care support (C), for example, can:
   1. render decision support to providers.
   2. perform workflow for patient care processes.
   3. enable clinical information exchange within, and external to, SAMHS.
   4. provide electronic forms of communication between providers, administrators and patients.
   5. enable care to remote patients.
   6. secure patient information.
   7. ensure patient privacy.
   8. ensure semantic interoperability across SAMHS (by means of the terminology function).
   9. support the integrity of systems, security, and clinical events with the audit function.
3. When invoked by population care (B), care support (C), for example, can:
   1. use decision support criteria for monitoring risks and raising clinical alerts.
   2. communicate population-related alerts and notifications (e.g. using Short Message Service (SMS) or email) to providers or facilities.
   3. perform workflow for epidemiological investigations.
   4. enable information exchange (of aggregated clinical information) with external institutions and authorities.
   5. enforce patient privacy with regard to clinical and personal information.
4. When invoked by care resources (D), care support (C), for example, can:
   1. use decision support criteria to evaluate clinical output such as lab results, medication dispensed, discharge summaries, etc.
   2. perform workflow for facilities (e.g. for hospital, pharmacy/dispensary, laboratory, etc).
   3. support the operational integrity of facilities with the audit function.

##### Group D: Care resources

Care resources (D) essentially administers resources used in healthcare, including providers, equipment and devices, and facilities (e.g. hospital, clinic, pharmacy/dispensary, radiology, laboratory, and emergency response).

1. Care resources (D) consists of two high-level functions, namely facility support (D) and facilities (D).
   1. Facility support (D) consists of common functions which are shared by facilities (D) functions. Facility support (D) functions either administers resources such as care providers, equipment and devices, etc, or they render services commonly needed by facilities, such as performance [management], infection control (IC) and waste management (WM). All facility support (D) functions are used as building blocks of the facilities (D) functions.
   2. Facilities (D) render and administers care to patients via care facilities (e.g. hospital, clinic, pharmacy/dispensary, radiology, laboratory, and emergency response, and a temporal field facility). In addition, it administers the day-to-day operations of the facility. This function is largely enabled by the patient care (A) and facility support (D) functions. Each facility function is composite, which means that it consists of functions that are unique to the facility as well as functions that are common (i.e. generic and therefore sharable by other functions). A facility function generically consists of two high-level functions, namely care and admin and resource admin.
      1. Care and admin high-level function centres on the clinical care and admin of a patient within the context of the facility. It consists of both unique and common functions. The latter are patient care (A) functions (both patient care provision [A] and patient care admin [A]).
      2. Whereas the care and admin function is patient centred, resource admin high-level function is operation centred, which means that it administers the resources of the facility to enable it to operate as a healthcare facility. It consists mostly of common functions from facility support (D).
2. Care resources (D) can generally invoke any care support (C) function when required.
3. Population care (B) uses information about the capacity and performance of resources (especially facilities [D]), which is provided by care resources (D).

#### Non-functional requirements

The following additional non-functional requirements, must be taken in consideration:

1. The system must be available twenty-four hours a day, seven days a week; with no interruption in services.
2. Users must have access to all data as allowed through role-based access control, thus data must be centrally available.
3. The system must be able to successfully handle concurrent use by
   1. approximately 200 000 active patients to make appointments, access, view and annotate their electronic health record (EHR) information and to communicate with providers;
   2. approximately 2000 internal providers; and
   3. approximately 2000 external providers.
4. The system must be accessible from anywhere, using any authorised computing device, including from outside RSA boarders and rural areas (e.g. laptop, desktop, smart phone, tablet).
5. The system must provide the ability to interface with medical equipment and patient wearables to retrieve and upload data.
6. The system must have the ability to interface with external DOD systems on different/other platforms, such as DOD HR system, DOD financial management system, DOD logistics system and DOD organisation information system.
7. The system must have the ability to interface with external systems from external organisations.
8. The system will be hosted on the GPCE.
9. The system will be deployed on the SITA core NGN.

### Services

#### System take-on services

eHealth system take-on must address the following, but not limited to:

1. Confirmation of hardware, software and connectivity requirements.
2. Confirmation of licensing requirements.
3. eHealth system installation.
4. Configuration of the eHealth system to cater for SAMHS business requirements.
5. System customisation:
   1. Customisation of existing functions
   2. Adding new modules or functions to the eHealth system
   3. It is foreseen that customisation will be necessary to accommodate DOD unique and discipline specific requirements. If DOD and discipline-specific business rules cannot be effectively applied via mechanisms such as decision support, workflow, role-based access control (RBAC), etc, customisation will be required. Interfaces to other DOD systems may also require customisation.
6. eHealth system testing that includes functionality, integration, performance, stress and user acceptance testing.
7. eHealth system operating processes and procedures.

System take-on must first be performed in a development and test environment, thereafter system take-on will be done for training, pre-production and production environments. Note that each of these environments exist on the primary as well as the secondary site.

#### System implementation services

A summary of the SITA Solution Implementation Methodology (SSIM) is provided below to serve as a ***guideline only***, to the bidder to determine the price for system implementation.

SSIM describes eight capabilities that are applicable to the implementation stages. The capabilities are:

1. Project management. A full life-cycle project management process is the essential connective tissue that holds every implementation project together. It entails *inter alia* initiating, planning, executing, monitoring & controlling and closing. A project management methodology needs to be followed.
2. Organisational change management (OCM). The OCM capability is based on the premise of understanding and aligning the SAMHS organisation with its objectives and strategies in order to maximise service delivery through effective and efficient use of resources. When new technology is implemented, SAMHS’s organisational culture becomes impacted where people’s way of working is transformed. Their principles, beliefs and the way they have done things for many years become challenged. OCM necessitates the transition by aligning people to new processes and technology. The aim is to minimise disruption to service delivery; minimise resistance and maximise productivity.
3. Data management. Data migration from the current HI legacy systems should encompass all business functions that consume data to ensure that it is properly populated in the new system. The capability involves acquitting the external source data records and ensuring that the data is clean and format-compatible with the new product’s base table format. The automated procedures required to load information from the source systems into the new product’s database are built. The data is then extracted from source systems, cleaned, loaded into the Interface Tables, and then loaded by various extract, transform and load (ETL) tools into the base tables. The data migration routines should be thoroughly tested.
4. Business process management. Business process management (BPM) is a natural and inherent part of every new software implementation or software upgrade project. The focus is on managing efficiency and effectiveness of business processes throughout the organisation by modelling, automating, managing and optimising any business process. By addressing end-to-end business processes, BPM cuts across organisations, applications and users. Workflow and decision support functionality of the new system are informed by business processes.
5. Technology management. Technology management ensures that the current technology environment is able to accommodate change as a result of implementation of the new system. The minimum technical requirements in terms of the desktop, local area (LAN), wide area network (WAN) and hosting environments required by the new system must be taken in consideration. This, together with the current technology environment, must then be utilised to determine the gap to be addressed to prepare the technical environment for the implementation.
6. Learner management. Learner management entails train the trainer, which includes the following:
   1. Train 10 SITA/DOD trainers to deliver end-user training to all users of the eHealth system.
   2. Train 5 SITA employees to deliver training on configuration of workflows, business decision support rules, clinical decision support rules.
   3. Train 5 SITA employees to deliver system administrator training to system administrators.
   4. Training / skills transfer to technical resources in order to maintain and support the eHealth system, e.g. license management, upgrades etc.
   5. Provide training material for end-user training as well as for technical resources training.
7. Solution management. Solution management capability ensures a tailor-made fit to SAMHS’s specific business processes using the solution. An effective Solution Management programme based on the best practices is required to guide the Solution Management team to successfully implement the contracted solution through the analysing, designing, configuring, customising, testing, certifying, deploying and go-live activities of the project.
8. Quality management. Quality management is to be performed continuously throughout the implementation project lifecycle to ensure that all activities required to design, configure and implement the solution are effective and efficient with respect to the solution and performance.

**The bidder is requested to provide a total price for each capability mentioned above, which add up to provide the total price for system implementation.**

**The bidder may use the above implementation capability information in conjunction with experience from previous implementations to determine the implementation service price.**

#### Maintenance and support services

The following services as specified in the Service Breakdown Structure (SBS) are required:

Table 3 – Maintenance and support SBS

| **SBS** | **Service Element** | **Service Grade** | **Service Level** |
| --- | --- | --- | --- |
|  | Incident Response | Normal | Maximum 4 hours |
|  | Incident Restore | Normal | Maximum 8 hours |
|  | System upgrades and patching | Normal | As and when needed on all environments, after thorough testing |

The bidder maintenance and support personnel must be available to render support and maintenance, within the given timeframes, from the hosting site at SITA Centurion/Erasmuskloof located in Pretoria, South Africa.

#### Ad hoc system enhancement services

During system take-on, implementation and thereafter new requirements or changes to the eHealth system may be identified. A fixed amount must be estimated in the total price to cater for such eventualities. It is foreseen that enhancement requirement specifications will be submitted to the bidder for impact analysis, planning and costing. The impact analysis exercise will assist the DOD and SITA with prioritisation of enhancements against available funds from the allocated fixed amount.

# Confidentiality

1. The information contained in this document is of a confidential nature, and must only be used for purposes of responding to this RFI. This confidentiality clause extends to all bidder(s) or associates whom you may decide to involve in preparing a response to this RFI.
2. For purposes of this process, the term “confidential information” shall include all technical and business information, including, without limiting the generality of the foregoing, all secret knowledge and information (including any and all financial, commercial, market, technical, functional and scientific information, and information relating to a party’s strategic objectives and planning and its past, present and future research and development), technical, functional and scientific requirements and specifications, data concerning business relationships, demonstrations, processes, machinery, know-how, architectural information, information contained in a party’s software and associated material and documentation, plans, designs and drawings and all material of whatever description, whether subject to or protected by copyright, patent or trademark, registered or un-registered, or otherwise disclosed or communicated before or after the date of this process.
3. The receiving party shall not, during the period of validity of this process, or at any time thereafter, use or disclose, directly or indirectly, the confidential information of SITA or its client (even if received before the date of this process) to any person whether in the employment of the receiving party or not, who does not take part in the performance of this process.
4. The receiving party shall take all such steps as may be reasonably necessary to prevent SITA’s confidential information coming into the possession of unauthorised third parties. In protecting the receiving party’s confidential information, SITA shall use the same degree of care, but no less than a reasonable degree of care, to prevent the unauthorised use or disclosure of the confidential information as the receiving party uses to protect its own confidential information.
5. Any documentation, software or records relating to confidential information of SITA or its client, which comes into the possession of the receiving party during the period of validity of this process or at any time thereafter or which has so come into its possession before the period of validity of this process:
   1. Shall be deemed to form part of the confidential information of SITA or its client;
   2. Shall be deemed to be the property of SITA or its client;
   3. Shall not be copied, reproduced, published or circulated by the receiving party unless and to the extent that such copying is necessary for the performance of this process and all other processes as contemplated in; and
   4. Shall be surrendered to SITA or its client on demand, and in any event on the termination of the investigations and negotiations, and the receiving party shall not retain any extracts.

# Precedence of documents

1. This RFI consists of a number of sections. Where there is a contradiction in terms between the clauses, phrases, words, stipulations or terms and herein referred to generally as stipulations in this RFI and the stipulations in any other document attached hereto, or the RFI submitted hereto, the relevant stipulations in this RFI shall take precedence.
2. Where this RFI is silent on any matter, the relevant stipulations addressing such matter and which appears in the SITA Procurement Policy and Procedures shall take precedence. RFI shall refrain from incorporating any additional stipulations in its RFI submitted in terms hereof other than in the form of a clearly marked recommendation that SITA may in its sole discretion elect to import or to ignore. Any such inclusion shall not be used for any purpose of interpretation unless it has been so imported or acknowledged by SITA.
3. It is acknowledged that all stipulations in the SITA Procurement Policy and Procedures are not equally applicable to all matters addressed in this RFI. It however remains the exclusive domain and election of SITA as to which of these stipulations are applicable and to what extent. The bidders are hereby acknowledging that the decision of SITA in this regard is final and binding. The onus to enquire and obtain clarity in this regard rests with the bidders. The bidders shall take care to restrict its enquiries in this regard to the most reasonable interpretations required to ensure the necessary consensus.

# Submission format

1. Bidders shall submit RFI response in accordance with the prescribed manner of submissions as specified below.
2. RFI responses must be submitted physically at SITA at [Tender Office, 459 Tsitsa Street, Erasmuskloof, Pretoria, 0105](mailto:Tenders@sita.co.za) on or before **03 March 2025** not later than **11h00** **South African Standard Time (UTC+2)**.
3. Bidders are requested to complete their responses in electronic format, in the spaces provided for answers within this document.
4. All additions to the information documents, i.e. appendices, supporting documentation, photographs, technical specifications and other support documentation covering suggested solutions etc. shall be submitted as part of this RFI.
5. No information shall be accepted by SITA if submitted in any manner other than as prescribed above.
6. SITA will not be liable for any costs incurred by the bidders in the preparation of response to this RFI. The preparation of responses will be made without obligation to accept any of the suggestions included in any response, or to discuss the reasons why such suggestions were accepted or rejected.
7. Responses are non-binding on both SITA and the bidder.
8. Bidders may respond to only selected parts of the document, should they choose to do so.
9. Estimated pricing must be included in the responses.
10. There will be NO PUBLIC OPENING of the RFI responses received; however, the list of responses received may be published on the SITA website.

# Oral presentations and briefing sessions

1. Bidders who respond to this RFI may be requested to give an oral presentation.
2. A virtual briefing session will be held for this RFI.

# Guideline to respond to the requirement

1. The bidder must provide information regarding existing eHealth Solution(s) on offer to fulfil the stated eHealth system requirement of SITA and its client.
2. The bidder must respond to each question in the table provided below where applicable.
3. The bidder must supplement the answer/response, where applicable, with full solution architecture documentation (e.g. product brochure and or training manual) that defines the building blocks (modules), functional and non-functional features of the solution.
4. The bidder should provide pricing as per Table 14 further below.
5. The bidder must indicate, for each functional requirement, whether the functionality of the proposed solution:
   1. exist in the proposed solution (no development required);
   2. must be customised with minor development to meet the requirement;
   3. does not exist and must be developed to meet the requirement; or
   4. does not exist in the proposed system and cannot be developed.

# Functional requirements

## Patient care requirements

Patient care requirements are expressed in Table 5 below, per functions as listed in below.

1. Patient care provision
   1. Clinical information
      1. Clinical history
         1. Patient history
         2. Allergy list
         3. Medication list
         4. Problem list
         5. Health factors list
         6. Immunisation list
         7. Medical device list
         8. Adverse events
         9. DOD-specific patient information
      2. Clinical documentation
         1. Assessments
            1. Standards assessments
            2. Context driven assessments
         2. Clinical measurements
         3. Clinical notes
         4. Other-provider documentation
         5. Clinical images
         6. Research participant care
      3. Self-care
      4. Problems and trends identification
      5. Information quality
   2. Administering
      1. Medication administration
      2. Immunisation administration
      3. Treatment administration
      4. Blood administration
      5. Specimen collection
   3. Future care
      1. Care plans
      2. Care recommendations
   4. Orders
      1. Order set templates
      2. Medication orders
         1. Drug utilisation review
            1. Medication interaction and allergy checking
            2. Medication dosing and warnings
            3. Formulary compliance
            4. Medication alert overrides
            5. Medication recommendations
            6. Medication reconciliation
         2. Patient compliance tracking
      3. Non-medication orders
         1. Radiology orders
         2. Laboratory orders
         3. Biologics orders
         4. Theatre
         5. Referrals
         6. Admission orders
         7. Meal orders
         8. Diet orders
         9. Consumables, medical supplies and assistive devices (non-pharmacy)
         10. Miscellaneous orders
      4. Order tracking
   5. Results
      1. Test results: laboratory
      2. Test results: radiology
2. Patient care admin
   1. Patient admin record
      1. Patient identification
      2. Health smartcard admin
      3. Patient registration
      4. Patient demographics
      5. Subject to subject relationship
         1. Related by genealogy
         2. Related by insurance
         3. Related by living situation
         4. Related by other means
      6. Patient preferences
      7. Patient advance directives
      8. Patient consent and authorisation
      9. Service authorisation
      10. Healthcare program
   2. Encounter/episode of care
      1. Care coordination
      2. Patient location (in facility)
      3. Patient residence (for service provision)
      4. Clinical coding
      5. Financial and administrative coding
      6. Care transitions and discharges
      7. Encounter documentation
      8. Patient declaration
   3. Case Management
      1. Finance (care-related)
         1. Cost management
         2. Invoicing
         3. Claims reimbursement
         4. Eligibility verification
   4. Patient belonging admin
   5. Patient home medication admin
      1. Patient home medication registration
      2. Patient home medication release

Column a of Table 5 reflects function names. The function for which descriptions and requirements are provided in column b, are typed in bold font. Functional hierarchy that provides context for the function in bold is indicated using arrows.

Column b of Table 5 contains the description and requirements relevant to the function stated in bold in column a.

Column c of Table 5 is used to indicate whether a requirement is considered as a core or non-core requirement. A requirement is classified as core when it must be satisfied by the eHealth system. Non-core requirements are considered as ‘nice-to-have’ requirements.

The bidder must indicate in Column d of Table 5, for each requirement, as indicated in the table below. Bidders are encouraged to provide additional information as comment per requirement (column d of Table 5).

Table 4 – Response legend (Patient Care)

| **Response indicator** | **Definition** |
| --- | --- |
| Y | The functionality exists in the proposed system (no development is required) |
| YC | The proposed system must be customised with minor development to meet the requirement |
| YD | The functionality does not exist and must be developed to meet the requirement |
| N | The functionality does not exist in the proposed system and cannot be developed |

**NOTE:** Where “according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law” is stated as part of a requirement it means that the system must be configurable to accommodate different rules and processes over time, based on RSA industry standards, SAMHS scope of practice, SAMHS policy and/or jurisdictional law.

Table 5 – Patient care requirements

| **No** | **Function** | **Description and Requirements** | **Core**  **Non-Core** | **Bidder response & comment:**  **Y = Yes exist**  **YC = Customise, Minor development**  **YD = Can be developed**  **N = Not available** |
| --- | --- | --- | --- | --- |
| **a** | **b** | **c** | **d** |
|  | Patient Care. 🡪 **Patient Care Provision**. | The system must support provision of patient care. Patient care provision pertains to all clinical aspects of patient care rendered in different care settings such as hospital, clinic, laboratory, radiology, pharmacy/dispensary and emergency care.  It must enable two inseparable, concurrent activities, which are: the actual rendering of care by a provider; and the generation of clinical information associated with that care.  Patient care provision functions occur within an encounter/episode of care (which is a function of patient care admin that the system must provide). In other words, an encounter/episode of care provides the administrative framework within which the clinical functions (of patient care provision) are performed. | Core. |  |
|  |  | The system must enable hospital patient care provision. | Core. |  |
|  |  | The system must enable clinic patient care provision. | Core. |  |
|  |  | The system must enable laboratory patient care provision. | Core. |  |
|  |  | The system must enable radiology patient care provision. | Core. |  |
|  |  | The system must enable emergency care patient care provision for all healthcare disciplines. | Core. |  |
|  |  | The system must enable pharmacy/dispensary patient care provision. | Core. |  |
|  |  | The system must enable remote patient care provision. | Core. |  |
|  |  | The system must enable patient care provision by various healthcare disciplines that are currently practised in SAMHS at the different healthcare facilities. Discipline-specific data generated per healthcare discipline, listed below must be incorporated in the patient electronic health record.  Audiology; Biokinetics; Clinical Technology; Laboratory disciplines: Andrology, Biochemistry, Chromosome, Clinical pathology, Cytology, Fluorescence in situ hybridization (FISH), Haematology, Hemopathology, Histology, Microbiology, Biochemical pathology, General pathology, Medical pathology, Polymerase chain reaction (PCR) laboratory, Serology, Virology; Dietetics; Medical Technology; Occupational Therapy; Orthotics & Prosthetics; Optometry; Physiotherapy; Podiatry / Chiropody; Reflexology; Speech Therapy; Anaesthesiology; Cardiology; Dermatology; Otorhinolaryngology; Acupuncture; Chiropractic; Homeopathy; Phytotherapy; Internal Medicine; Physical Medicine; Pulmonology; Rheumatology; Sonography; Community Care Nursing; Stoma-therapy; Gynaecology; Obstetrics; Neurology; Oncology; Oncology Radiation; Ophthalmology; Orthopaedics; Paediatrics, Psychiatry; Gastroenterology; Neurosurgery; Plastic & Reconstruction surgery; Thoracic Surgery; Urology; Dentistry; Maxillo-Facial & Oral; Forensic dentistry; Oral pathology; Orthodontics; Periodontics; Prosthodontics; Psychology; Psychometry; Neuropsychology; and Social Work. | Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 **Clinical Information.** | Clinical information consists of clinical history and clinical documentation. | Core. |  |
|  |  | The system must enable the clinical information to be visible and accessible to providers according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must be able to distinguish information about patients from information about other persons documented within an electronic health record (EHR), e.g. family history, the heart rate of a foetus in the mother's record. | Core. |  |
|  |  | The system must provide the ability to distinguish between a patient’s forensic charting from forensic charting of other members of the family. | Core. |  |
|  |  | The system must be able to record and present pre-birth and post-death entries per patient for all healthcare disciplines e.g. oral post-death clinical information. | Core. |  |
|  |  | The system must provide the ability to record and present pre-mortem clinical information for all healthcare disciplines. | Core. |  |
|  |  | The system must provide the ability to capture, update and render death diagnosis codes and causes of mortality in accordance with South African prescripts and guidelines (death within an encounter and outside of an encounter). | Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Clinical Information. 🡪 **Clinical History.** | The system must keep patient clinical history lists which include summary clinical history information as well as detailed clinical history. These lists serve as succinct "snapshots" of critical health information. | Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Clinical Information. 🡪 Clinical History. 🡪 **Patient History.** | Patient history is usually patient-reported during the first encounter. It includes historical data such as a history of current illness, medical diagnoses, surgeries and other procedures, providers involved, health conditions of family members, relevant occupation-related information, living situation and environmental factors (past or present). Such information may be both positive and negative e.g. “the patient has had...” or “the patient has not had...”. | Core. |  |
|  |  | The system should provide the ability to create, update and render current patient history that includes relevant positive and negative elements such as diagnosis or ruled out diagnosis. | Non-Core. |  |
|  |  | The system should provide the ability to manage and reflect the identity of clinicians involved in patient history elements according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  |  | The system should provide functionality to capture, store and render previous external patient histories as sourced from external clinical documents and external clinical data. | Non-Core. |  |
|  |  | The system should provide the ability to capture family history. | Non-Core. |  |
|  |  | The system should provide the ability to capture social history. | Non-Core. |  |
|  |  | The system should provide the functionality to capture as part of the patient history the patient's relationships (e.g. genealogic, living situation, other). | Non-Core. |  |
|  |  | The system should provide the ability to capture structured data in the patient history such as administrative, social, mental health, geographic location, and/or financial statuses, poverty, orphan, disability, incarceration, incompetence. | Non-Core. |  |
|  |  | The system must maintain and provide documentation/patient history in sequential and non-sequential order, per consistent time intervals as well as per inconsistent time intervals. | Core. |  |
|  |  | The system should provide the ability to capture Investigational Product (e.g. medication, device, immunisation) exposure information including Start Date/Time, End Date/Time, Dose Amount, Dose Unit, Study Treatment Name, Route, Formulation as distinct elements. | Non-Core. |  |
|  |  | The system should have the ability to manage information regarding past and present living situations or environmental factors related to the patient (e.g. war, famine, poverty, political situation, or proximity to dangerous chemicals) according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Clinical Information. 🡪 Clinical History. 🡪 **Allergy List.** | The system must provide the ability to maintain the Allergy list over time, and to reflect the patient’s allergies, intolerances and adverse reactions. The allergy list must store coded and free text, and pertinent dates, including patient-reported events. | Core. |  |
|  |  | The system must provide the ability to manage allergy, intolerance, and adverse reaction to drug, food, medical products (e.g. vaccines, biologics, devices, chemicals), treatments and environmental triggers as distinct entries. | Core. |  |
|  |  | The system must provide the ability to manage the reason for the capture, update or removal of the allergy, no-longer-allergic, intolerance, sensitivity, and adverse reaction. | Core. |  |
|  |  | The system must provide the ability to manage the reaction type as distinct data. | Core. |  |
|  |  | The system must provide the ability to manage the reaction type as coded data. | Core. |  |
|  |  | The system must provide the ability to manage the severity of an allergic or adverse reaction as distinct data elements. | Core. |  |
|  |  | The system must provide the ability to manage a report of No Known Allergies (NKA) for the patient. | Core. |  |
|  |  | The system must provide the ability to manage a report of No Known Food Allergies (NKFA) for the patient. | Core. |  |
|  |  | The system must provide the ability to manage the source of allergy, intolerance, and adverse reaction information. | Core. |  |
|  |  | The system must provide the ability to mark an allergy, intolerance or adverse reaction as deactivated. | Core. |  |
|  |  | The system should provide the ability to capture as distinct data, the reason(s) for deactivation of an allergy, intolerance or adverse reaction. | Non-Core. |  |
|  |  | The system must provide functionality to extract an allergy, intolerance, and adverse reaction that has been deactivated. | Core. |  |
|  |  | The system should provide the functionality to render the list of allergies, intolerances and adverse reactions in a user-defined sort order, for example sorted per severity or per date-of-onset. | Non-Core. |  |
|  |  | The system should provide the ability to indicate that the list of allergies, intolerances and adverse reactions has been reviewed. | Non-Core. |  |
|  |  | They system must provide the ability to capture and render the date on which allergy information was captured on the system. | Core. |  |
|  |  | The system must provide the ability to capture and render the approximate date of the allergy occurrence. | Core. |  |
|  |  | The system must provide the ability to capture and maintain allergy information prior to completion of medication orders. | Core. |  |
|  |  | The system should provide the ability to capture and render that the allergies are "Unknown" or "Unable to Assess Allergies". | Non-Core. |  |
|  |  | The system should provide the ability to capture the reason for "Unknown" or "Unable to Assess Allergies" documentation. | Non-Core. |  |
|  |  | The system must provide the ability to capture allergies, intolerances and adverse reactions as coded data entries. | Core. |  |
|  |  | The system must provide functionality to render historical allergy information. | Core. |  |
|  |  | The system should provide the ability to link an allergy, intolerance, or adverse reaction with diagnostic results (e.g. laboratory or allergy test result). | Non-Core. |  |
|  |  | The system should provide the ability to render any potential medication interactions and allergy checking when capturing or maintaining allergies, intolerances or adverse reactions. | Non-Core. |  |
|  |  | The system must maintain an indicator that a provider was presented with, and acknowledged (or did not acknowledge), a drug interaction notification. | Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Clinical Information. 🡪 Clinical History. 🡪 **Medication List.** | The system must provide the ability to manage medication lists. Medication lists must be managed over time, which may be, e.g. over an episode of care, stay, or the patient’s lifetime. They must reflect the entire medication history and must not be limited to provider orders/prescriptions: they may include over-the-counter products, alternative supplements, patient-reported medications, etc. All pertinent dates, including medication start, modification, and end dates must be stored. | Core. |  |
|  |  | The system must be able to distinguish whether medication is taken for chronic or acute conditions | Core |  |
|  |  | The system must provide the functionality to manage a patient-specific medication list based on current medication orders or prescriptions. | Core. |  |
|  |  | The system must provide the ability to manage as distinct data the details of the medication information including name of the medication ordered, medication identifier (e.g. RxNORM), prescriber, ordering date, SIG (e.g. dose amount and quantity, timing, duration and route, and/or site of administration), quantity, formulation and ancillary instructions according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system should provide the ability to manage as distinct data the Study Treatment Name for any captured Investigational Product Exposures according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  |  | The system should provide the ability to capture, per patient, all dates associated with medications including start, end, and discontinuation dates according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  |  | The system must provide the ability to capture and maintain current and historical patient-specific medications in the Medication List. | Core. |  |
|  |  | The system should provide the ability to capture non-prescription medications including over the counter (OTC) and complementary medications such as vitamins, and supplements. | Non-Core. |  |
|  |  | The system must provide the ability to render the medication history associated with a patient. | Core. |  |
|  |  | The system must provide the ability to mark a medication as "erroneously captured". Such medication entry may not be deleted. | Core. |  |
|  |  | The system must provide the ability to deliver a Medication List excluding medications that have been marked as "erroneously captured". | Core. |  |
|  |  | The system should render an indicator that a medication is marked as "erroneously captured" when that medication is provided in a Medication List. | Non-Core. |  |
|  |  | The system must provide the ability to render a current medication list for patient use. | Core. |  |
|  |  | The system must provide the ability to capture and render information regarding the filling of prescriptions - prior to the prescription being dispensed. | Core. |  |
|  |  | The system must provide the ability to capture and render a note/comment that a prescription cannot be filled. | Core. |  |
|  |  | The system should provide the ability to capture and render a note/comment that a prescription cannot be dispensed. | Non-Core. |  |
|  |  | The system should provide functionality to receive current medications and a medication history from an external source such as a treatment plan or pharmacy/ dispensary | Non-Core. |  |
|  |  | The system should provide the ability to mark that a medication history is unavailable or incomplete. | Non-Core. |  |
|  |  | The system should provide the ability to mark and render, on the active medication list, active medications that the patient brings from home to take while hospitalised, which the pharmacy/dispensary may not dispense, according to RSA industry standards, scope of practice, and/or organisational policy. | Non-Core. |  |
|  |  | The system must provide the ability to maintain the medication list with changes from pharmacist verification including pharmacist, date, and time. | Core. |  |
|  |  | The system should provide the ability to manage the reason or indication for the medication when recording historical medications or medications from external sources such as from other providers or home medication. | Non-Core. |  |
|  |  | The system must provide the ability to update a medication order directly from the medication list. | Core. |  |
|  |  | The system must provide the ability to render any potential medication interactions and allergy checking when capturing or maintaining medications. | Core. |  |
|  |  | The system should provide the ability to render side effects of medications from the medication list that have been previously experienced by the patient. | Non-Core. |  |
|  |  | The system should provide the ability to render potential side effects of medications from the medication list. | Non-Core. |  |
|  |  | The system should provide the ability to capture patient preferences regarding receipt of medication (e.g. refusal of all or certain medication). | Non-Core. |  |
|  |  | The system should provide the ability to render a list of active medications, including medications that may still have a physiologic effect long after last administration. | Non-Core. |  |
|  |  | The system should provide the ability to render non-active medications or prescriptions for inclusion in current medication screening. | Non-Core. |  |
|  |  | The system should provide the ability to capture medication self-administration details including timestamps, observations, complications, and reason where medication dose was not taken. | Non-Core. |  |
|  |  | The system should provide the ability to capture, maintain and present pre-admission medications according to RSA industry standards, scope of practice, and/or organisational policy. | Non-Core. |  |
|  |  | The system should present pre-admission medications at the time of discharge according to RSA industry standards, scope of practice, and/or organisational policy. | Non-Core. |  |
|  |  | The system must provide the ability to maintain a coded list of medications for the patient (including a unique identifier for each medication). | Core. |  |
|  |  | The system should provide the ability to enter and maintain medication information supplied by the patient. | Non-Core. |  |
|  |  | The system should provide the ability to electronically capture medication information brought in by the patient (e.g. scanned bar code from an Rx label). | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Clinical Information. 🡪 Clinical History. 🡪 **Problem List.** | The system must provide the ability to manage problem lists. The problem list may include, but is not limited to, chronic and acute conditions, diagnoses, symptoms, injury/poisoning, adverse effects of medical care (e.g. drugs, surgical), functional limitations, visit or stay-specific conditions, diagnoses, or symptoms. It is managed over time and enables problem tracking (history). | Core. |  |
|  |  | The system must provide the ability to manage, as distinct data, all active problems associated with a patient. | Core. |  |
|  |  | The system must provide the ability to capture, maintain and render a history of all problems associated with a patient. | Core. |  |
|  |  | The system should provide the ability to manage the status of each problem (e.g. active, inactive, resolved). | Non-Core. |  |
|  |  | The system should provide the ability to update an inactive problem in order to re-activate it. Record of the status change must be kept. | Non-Core. |  |
|  |  | The system must provide the ability to manage applicable dates including the onset date of the problem and date(s) of problem status change (e.g. inactivation or resolution date). | Core. |  |
|  |  | The system must provide the ability to manage information about and distinguish between chronic and acute statuses of a problem. | Core. |  |
|  |  | The system should provide the ability to manage information regarding the information source (i.e. informant) of the problem and problem status changes. | Non-Core. |  |
|  |  | The system must provide the ability to enable the inactivation or deprecation of a problem, i.e. deprecate or retract one or more instances of problem list record entries as invalid. | Core. |  |
|  |  | The system must provide the ability to render the problem list in a user-defined sort order. | Core. |  |
|  |  | The system must provide the ability to render only active problems. | Core. |  |
|  |  | The system should provide the ability to link one or more problem(s) in the Problem list to encounters. Any patient-provider contact is referred to as an encounter. | Non-Core. |  |
|  |  | The system should provide the ability to link one or more problem(s) in the Problem List to medications. | Non-Core. |  |
|  |  | The system should provide the ability to link one or more problem(s) in the Problem list to orders. | Non-Core. |  |
|  |  | The system should provide the ability to link one or more problem(s) in the Problem list to medical equipment. | Non-Core. |  |
|  |  | The system should provide the ability to link one or more problem(s) in the Problem list to patient medical devices such as prosthetic/orthotic devices on the patient medical device list. | Non-Core. |  |
|  |  | The system should provide the ability to link one or more problem(s) in the Problem list to encounter notes/documentation that were generated during an encounter (patient-provider contact). | Non-Core. |  |
|  |  | The system should provide the ability to link orders, medical equipment, patient medical devices (prosthetic/orthotic devices), and medications to one or more codified problems on the Problem List. | Non-Core. |  |
|  |  | The system must provide the ability to capture problems in free text format and render them in a manner that distinguishes them from coded problem entries. | Core. |  |
|  |  | The system must provide the ability to capture a problem into the problem list using standardised coding schemas in accordance with RSA industry standard. | Core. |  |
|  |  | The system must provide the ability to manage free text comments associated with the problem. | Core. |  |
|  |  | The system should provide the ability to manage the severity of a problem using a standards-based classification scheme. | Non-Core. |  |
|  |  | The system should provide the ability to link actions taken and outcomes with a problem. | Non-Core. |  |
|  |  | The system should provide the ability to manage problems for known genetically based illnesses (e.g. single allele carrier status of a genetic trait or disease) according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  |  | The system should provide the ability to manage a known single allele carrier status of a genetic trait or disease according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law, and subject to patient's preferences and consent. | Non-Core. |  |
|  |  | The system should provide the ability to manage the linking of problems to other problems on the problem list, i.e. creating hierarchies within the problem list. | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Clinical Information. 🡪 Clinical History. 🡪 **Health Factor List.** | The system must provide the ability to manage health factor lists. A health factor list includes patient strengths and weaknesses (positive and negative factors) that might impact care or recovery. It supports development of care plans and treatment options. Examples include family support, financial status, overall health, health behaviour (e.g. smoking, physical activity, sleep), body mass index, employment status/type, access to care or education level. | Core. |  |
|  |  | The system must provide the ability to manage, as distinct data, patient-specific Health-Related Factors. | Core. |  |
|  |  | The system should provide the ability to manage the source of information regarding patient-specific Health-Related Factors. | Non-Core. |  |
|  |  | The system must provide the ability to enable the inactivation or deprecation of a patient-specific health-related factor(s). | Core. |  |
|  |  | The system must provide the ability to update a patient-specific health-related factor(s) to re-activate previously deactivated patient-specific health-related factor(s). Record of the patient-specific health-related factor status change must be kept. | Core. |  |
|  |  | The system should provide the ability to link encounters, orders, medications and encounter notes/encounter documentation to one or more patient-specific Health-Related Factors. | Non-Core. |  |
|  |  | The system should provide the ability to capture a patient-specific health-related factor using standardised coding schemes. | Non-Core. |  |
|  |  | The system must provide the ability to capture patient-specific health-related factors in free text format and render them in a manner that distinguishes them from coded patient-specific Health-Related Factor entries. | Core. |  |
|  |  | The system must provide the ability to manage free text comments associated with patient-specific Health-Related Factors. | Core. |  |
|  |  | The system should provide the ability to link actions taken (e.g. placing an order for home health aide) and outcomes (e.g. family providing additional home support) with patient-specific Health-Related Factors (e.g. living alone). | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Clinical Information. 🡪 Clinical History. 🡪 **Immunisation List.** | The system must provide the ability to manage patient immunisation lists. An immunisation[[3]](#footnote-3) list must be managed over time, and in addition to immunisations administered, date, type, manufacturer and lot number must be recorded. | Core. |  |
|  |  | The system must provide the ability to manage all immunisations associated with a patient. | Core. |  |
|  |  | The system must provide the ability to maintain immunisation details, as distinct data, including:   1. Immunisation name/type. | Core. |  |
|  |  | 1. Sequence number in the series & series identifier. | Core. |  |
|  |  | 1. Strength and dose. | Core. |  |
|  |  | 1. Date and time of administration. | Core. |  |
|  |  | 1. Manufacturer. | Core. |  |
|  |  | 1. Lot number. | Core. |  |
|  |  | 1. Expiration date. | Core. |  |
|  |  | 1. Route and site of administration. | Core. |  |
|  |  | 1. Administering provider. | Core. |  |
|  |  | 1. Observations, reactions and complications. | Non-Core. |  |
|  |  | 1. Reason immunisation not given. | Non-Core. |  |
|  |  | 1. Immunisation related activity not performed; according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  |  | The system should provide the ability to manage, as distinct elements, data associated with an immunisation that was not given to a patient (e.g. due to a contraindication or a patient's refusal). Data associated with an immunisation that was not given to a patient includes date-and-time, immunisation type, series, exception reason, and immunisation-withholding provider. | Non-Core. |  |
|  |  | The system must provide the ability to render a report of a patient's immunisation history (e.g. for appropriate authorities such as schools, day-care centers or public health immunisation registries) according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to capture the currently recommended date for a companion immunisation (e.g. a follow-up or booster dose) with each immunisation (if such a companion immunisation is needed). | Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Clinical Information. 🡪 Clinical History. 🡪 **Medical Device List.** | The system must provide the ability to manage patient medical device lists over time. A patient medical device list includes medical devices such as prosthetic, orthotic, and implantable devices issued to the patient. Information to identify and track a device, including information such as device type, dates (issued, implanted, manufactured), model number, serial/lot number, manufacturer, supplier, anatomical location, date of battery change, etc must be recorded. Note that CDS must generate an alert when a medical device is recalled. | Core. |  |
|  |  | The system must provide the ability to manage, as distinct data, a patient-specific list of specialised medical equipment, prosthetic, orthotic, and/or implantable devices. | Core. |  |
|  |  | The system must provide the ability to capture, maintain and render, as distinct data, the description of each instance of use of specialised medical equipment, prosthetic, orthotic, and/or implantable device. | Core. |  |
|  |  | The system should provide the ability to capture, maintain and render the reason for each instance of use of specialised medical equipment, prosthetic, orthotic, and/or implantable device. | Non-Core. |  |
|  |  | The system should provide the ability to capture, maintain and render the specific type of specialised medical equipment, prosthetic, orthotic, and/or implantable device. | Non-Core. |  |
|  |  | The system should provide the ability to capture an indication of No Known specialised medical equipment, prosthetic, orthotic, and/or implantable device for the patient. | Non-Core. |  |
|  |  | The system should provide the ability to capture, maintain and render, as distinct data, information necessary to identify and track the equipment/device including, at a minimum: type, manufacturer, manufacture date, date implanted (or placed into service), date removed/discontinued, model/serial number, anatomical location and any unique device identifier. | Non-Core. |  |
|  |  | The system should provide the ability to mark as deactivated and capture reason for deactivation, an entry in the list when the specialised medical equipment, prosthetic, orthotic, or implantable device is no longer in use by the patient. | Non-Core. |  |
|  |  | The system should provide the ability to update an entry in the list to re-activate a previously deactivated specialised medical equipment, medical prosthetic, orthotic, or implantable device. | Non-Core. |  |
|  |  | The system should provide the ability to render a list of deactivated specialised medical equipment, prosthetic, orthotic, or implantable devices including the reason for deactivation. | Non-Core. |  |
|  |  | The system should provide the ability to capture the date of the next scheduled patient-specific equipment or device maintenance. | Non-Core. |  |
|  |  | The system should provide the ability to capture equipment or device maintenance instructions. | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Clinical Information. 🡪 Clinical History. 🡪 **Adverse Events.** | The system must provide the ability to manage adverse events/idiosyncrasies that occurred to a patient.  The system must provide the ability to capture distinct information about adverse events for serious adverse event (SAE) reports according to policy and legislation. Reports may conform to the Health Level Seven (HL7) Individual Case Safety Report (ICSR).  Note that a SAE is any untoward medical event attributed to a therapeutic agent at any dose, which: results in death; is life threatening; requires hospitalisation or prolongation of hospitalisation; results in persistent or significant disability/incapacity; or causes a congenital anomaly/birth defect. | Core. |  |
|  |  | The system should provide the ability to manage adverse events associated with a patient. | Non-Core. |  |
|  |  | The system should provide the ability to capture and maintain, as distinct data, an adverse event. Distinct data must include:   1. Patient identification. | Core. |  |
|  |  | 1. Event date/time. | Core. |  |
|  |  | 1. Event description. | Core. |  |
|  |  | 1. Event severity. | Core. |  |
|  |  | 1. Event category (e.g. medication error, fall). | Core. |  |
|  |  | 1. Care providers associated with the event. | Core. |  |
|  |  | The system should provide the ability to capture and render a SAE report according to organisational policy, and/or jurisdictional law (which may include HL7 ICSR). | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Clinical Information. 🡪 Clinical History. 🡪 **DOD-Specific Patient Information.** | The system must provide the ability to manage DOD-specific patient (employee) information. | Core. |  |
|  |  | The system must provide the ability to capture, maintain and render the health status of a patient. The health status must be linked to the assessment/encounter where the health status was determined. | Core. |  |
|  |  | The system must provide the ability to capture, maintain and render the social welfare profile of a member. The welfare profile must be linked to the assessment/encounter where the welfare profile was determined. | Core. |  |
|  |  | The system must provide the ability to capture, maintain and render the medical classification per member. The medical classification must be linked to the relevant assessment/encounter where the medical classification was determined. | Core. |  |
|  |  | The system must provide the ability to capture patient occupational fitness history. | Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Clinical Information. 🡪 **Clinical Documentation.** | The system must support clinical documentation. Clinical documentation includes all documentation that a provider might create during an encounter with, or relevant to, a patient. This includes assessments, clinical measurements, photos/images, videos of the patient, clinical documents and notes. It also includes acknowledging and amending documentation from other providers. | Core. |  |
|  |  | The system must provide the ability for providers to sign (electronic signature) clinical documentation according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Clinical Information. 🡪 Clinical Documentation. 🡪 **Assessments.** | The system must provide the ability to manage assessments. Assessments occur during patient/provider encounters and are generally relevant to a patient’s age, gender, developmental or functional state, medical condition and behavioural condition, e.g. growth charts, developmental profiles, disease specific assessments, and anaesthesia related assessments of a patient before, during and after surgery. When possible, it should follow a standard protocol (when a template does not exist, the system must provide the ability to create a new template based on a similar one or based on DOD requirements for specific assessments such as oral health assessments and classifications). Note that CDS is provided for assessments as described under standard assessments and context-driven assessment below. | Core. |  |
|  |  | The system must provide the ability to manage assessment information captured (e.g. age, gender, developmental state, and health condition) according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law for different types of assessments. | Core. |  |
|  |  | The system must provide the ability to manage patient information captured using recognised-standard, and/or locally defined assessments according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law for different types of assessments. | Core. |  |
|  |  | The system must provide the ability to manage additional assessment information as the patient's medical condition changes. | Core. |  |
|  |  | The system should provide the ability to link assessment information to a problem list according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  |  | The system should provide the ability to transmit assessment information to an individual care plan according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  |  | The system must provide the ability to capture assessment outcome related to restrictions against a patient’s record. The restriction as well as the period that the restriction is valid/applicable must be stored. For example, assessment results may restrict a patient (employee) from doing any physical work for a specific period of time. | Core. |  |
|  |  | The system should provide the ability to receive assessment information from external sources (e.g. laboratory results and radiographic results) according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  |  | The system should provide the ability to analyse and render assessment data compared with standardised curves (e.g. growth charts). | Non-Core. |  |
|  |  | The system should provide the ability to render assessment information as trends on a graph or a flowsheet. | Non-Core. |  |
|  |  | The system should provide the ability to exchange data between an assessment and a medication list. | Non-Core. |  |
|  |  | The system should provide the ability to analyse assessment information using clinical prediction rules (e.g. the Glasgow Coma Score or Well's score) and capture and render the results. | Non-Core. |  |
|  |  | The system should provide the ability to render prior versions of completed recognised-standard, and/or locally-defined assessment information. | Non-Core. |  |
|  |  | The system must provide the ability to analyse the schedule of mandated assessments, render a proposed schedule, and capture the assessment appointments. | Core. |  |
|  |  | The system should determine and render a proposed list of assessments based on context-related information (e.g. chief complaint, length of stay (LOS), abnormal vital signs, or response to medication). | Non-Core. |  |
|  |  | The system must provide the ability to capture, render and store assessment information (questionnaires, responses and analysis) and the final score as distinct data as appropriate. | Core. |  |
|  |  | The system should provide the ability to analyse by comparing "elements of assessments captured by the clinician" to "those elements of assessments designated by the organisation as best practice assessments, and/or evidence-based resources" and render the results of the analysis. | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Clinical Information. 🡪 Clinical Documentation. 🡪 Assessments. 🡪 **Standard Assessments.** | The system must provide the ability to manage standard assessments, which are assessment forms that assist in developing, and adhering to, care plans, guidelines, and protocols. | Core. |  |
|  |  | The system must provide the ability to create multiple new standard assessments with relevant forms, workflows and results. This includes different types of annual health fitness assessments such as oral health fitness assessments (OHF). The system must be configurable to handle different assessment aspects as per the different types of assessments according to RSA industry standards, scope of practice, organisational policy and jurisdictional law. Assessment information and results of assessment must be incorporated into the patient’s EHR. | Core. |  |
|  |  | The system must provide the ability to capture, maintain and render health fitness classes per patient as required for different types of health fitness assessments. | Core. |  |
|  |  | The system must provide the ability to capture, maintain and render a patient’s relevant health fitness profile as part of a health fitness assessment. | Core. |  |
|  |  | The system must provide the ability to render relevant health fitness profile letters per patient. | Core. |  |
|  |  | The system must provide the ability to transmit health fitness profile letters to recipients as per organisational policy. | Core. |  |
|  |  | The system must provide the ability to capture and render the relevant health operational status of a patient, as part of a health fitness assessment. | Core. |  |
|  |  | The system must provide the ability to capture, maintain, and render recognised-standard assessment information in the patient record. | Core. |  |
|  |  | The system must provide the ability to capture supplemental assessment data from evidence-based standard assessments, practice standards, or other generally accepted, verifiable, and regularly updated standard clinical sources. | Core. |  |
|  |  | The system must render prompts based on practice standards (business rules/clinical rules & protocols) to recommend additional assessment functions. | Core. |  |
|  |  | The system should provide the ability to capture the configuration of prompts based on practice standards to recommend additional assessment functions (e.g. by defining the text of each prompt). | Non-Core. |  |
|  |  | The system must provide the ability to maintain the problem list by activating new problems and deactivating old problems as identified when captured using recognised-standard, and/or locally-defined assessments. | Core. |  |
|  |  | The system must provide the ability to maintain recognised-standard, and/or locally-defined assessment information for problems identified on the patient's problem list. | Core. |  |
|  |  | The system must audit modifications to the title, version, and data field labels (i.e. questions) of the recognised-standard, and/or locally-defined assessment used in a patient encounter. | Core. |  |
|  |  | The system must provide the ability to link the value of the assessment responses to the related data field label (i.e. link the answer to the exact wording of the question). | Core. |  |
|  |  | The system must provide the ability to manage assessment templates for provider use in assessing patient condition according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to manage recognised-standard, and/or locally-defined assessment templates according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Clinical Information. 🡪 Clinical Documentation. 🡪 Assessments. 🡪 **Context-driven Assessments.** | The system should enable context-driven assessments. Context-driven assessments must issue prompts based on patient-specific information. For example, it must use the medication list and knowledge base to detect if symptoms are side effects of medication already prescribed; important diagnoses could be highlighted, e.g. ectopic pregnancy in a woman of childbearing age, or appendicitis in a geriatric patient with abdominal pain.  In addition to general clinical assessments, an assessment can also be part of a multidisciplinary full health assessment. An assessment can also pertain to healthcare surveillance which, as part of occupational health and safety (OHS), conducts either generic assessments on specified occasions, or periodic occupation-specific assessments. | Non-Core. |  |
|  |  | The system should provide the ability to analyse assessment data entered during the encounter against health evidence-based standards and best practices. | Non-Core. |  |
|  |  | The system should analyse health data and patient context-driven assessments in terms of practice standards, and render notifications (e.g. of possible additional testing, possible diagnoses, or adjunctive treatment). | Non-Core. |  |
|  |  | The system should provide the ability to analyse assessment data against data in the patient-specific problem list. | Non-Core. |  |
|  |  | The system should provide the ability to manage care-setting-specific templates. | Non-Core. |  |
|  |  | The system should provide the ability to render alerts based on patient-specific clinical data (e.g. age for neonates, paediatrics, geriatrics; conditions for impaired renal function; medication). | Non-Core. |  |
|  |  | The system should provide integrated diagnosis driven documentation templates. | Non-Core. |  |
|  |  | The system should provide integrated disposition diagnosis driven documentation templates. | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Clinical Information. 🡪 Clinical Documentation. 🡪 **Clinical Measurements.** | The system must enable clinical measurements. The system must provide the ability to record clinical measurements such as vital signs in an episode of care as distinct data to enable reporting and provision of care. Other clinical measures include expiratory flow rate, size of lesion, etc. | Core. |  |
|  |  | The system must provide the ability to capture patient vital signs (e.g. blood pressure, temperature, heart rate, respiratory rate, and pain scale) as distinct elements of structured data. | Core. |  |
|  |  | The system must provide the ability to capture other clinical measures (such as peak expiratory flow rate, size of lesions, oxygen saturation, height, weight, length, body mass index and severity of pain) as distinct elements of structured data. | Core. |  |
|  |  | The system must provide the ability to determine additional values within an assessment, based on distinct or atomic elements (e.g. Body Mass Index based on height and weight). | Core. |  |
|  |  | The system should provide the ability to import or receive clinical measurements (e.g. bone density, bone age, cardiac rhythm) from an ancillary system or external device (e.g. Holter monitor) as distinct elements of structured data. | Non-Core. |  |
|  |  | The system should provide the ability to capture mood, behaviour and daily functioning as structured and unstructured data. | Non-Core. |  |
|  |  | The system should provide the ability to determine and render percentile values when data with normative distributions are entered. | Non-Core. |  |
|  |  | The system should provide the ability to determine based on information provided, normal ranges for numeric, as well as normal values for non-numeric, data (e.g. presence or absence of physical findings based on developmental stage) based on age and other parameters such as height, weight, ethnicity or gestational age. | Non-Core. |  |
|  |  | The system should provide the ability to render target clinical measurement values according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law (e.g. mean target total blood cholesterol of 199 mg/dL as recommended by Public Health authorities). | Non-Core. |  |
|  |  | The system must provide the ability to capture both the time the clinical measurement was taken as well as the time it was entered into the system, including measurements from an ancillary system or external device. | Core. |  |
|  |  | The system must provide the ability to capture, as distinct data, clinical measurement (including vital signs) contextual information (e.g. methods used for the vital signs measurements, position of patient). | Core. |  |
|  |  | The system must provide the ability to render trends of clinical measurements. | Core. |  |
|  |  | The system must allow for monitoring readings over a specified time for clinical decisions indicating mean readings for BP etc catering for short term monitoring of vital signs for diagnosis. | Core. |  |
|  |  | The system should provide the ability to render growth charts that include growth data (weight, length or height and head circumference) on a graph that includes normative data plotted against population-based normative curves by age ranges, gender and ethnicity of the respective normative data (e.g. females 0-36 months). | Non-Core. |  |
|  |  | The system should determine and render the number of standard deviations from the mean when data with normal distributions are captured. | Non-Core. |  |
|  |  | The system must provide the ability to capture, store and render data using different units of measurement (e.g. grams, kilograms). | Core. |  |
|  |  | The system should provide the ability to capture and render clinical context for each data point on the growth chart (e.g. ventilated, receiving growth hormone, Tanner Stage/sexual maturity rating (SMR)). | Non-Core. |  |
|  |  | The system should provide the ability to capture, maintain, and render patient maturity level measurements (e.g. using the Tanner Stage/SMR method). | Non-Core. |  |
|  |  | The system should provide the ability to determine post conceptional age (corrected age) for the purposes of decision support. | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Clinical Information. 🡪 Clinical Documentation. 🡪 **Clinical Notes.** | The system must provide the ability to manage clinical notes. Clinical notes can be unstructured or structured (through use of coded data) and can be transcribed or directly-entered. A provider’s response to incoming data on orders and results may be in free text or in statuses (e.g. reviewed and filed, recall patient, or future follow up). This function must support documenting the provider’s differential diagnosis process and research participation clinical notes. | Core. |  |
|  |  | The system must provide the ability to capture and render clinical documentation as structured, and unstructured data. | Core. |  |
|  |  | The system must present documentation templates (structured and free text) to facilitate creation of documentation. | Core. |  |
|  |  | The system must provide the ability to present existing documentation within the patient's EHR while creating new documentation. | Core. |  |
|  |  | The system must provide the ability to link documentation/clinical notes with specific patient encounter(s) or event(s) (e.g. office visit, phone communication, e-mail consult, laboratory result). | Core. |  |
|  |  | The system must provide the ability to render the list of clinical notes in a user-defined sort order. | Core. |  |
|  |  | The system must provide the ability to link clinical documents and notes to one or more problems on the patient’s problem list. | Core. |  |
|  |  | The system must provide the ability to update documentation prior to finalising it. | Core. |  |
|  |  | The system should provide the ability to tag a document or note as final, according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  |  | The system must provide the ability to record and render all author(s) and authenticator(s) of documentation. | Core. |  |
|  |  | The system must provide the ability to render designated documents based on metadata search and filter (e.g. note type, date range, facility, author, authenticator and patient). | Core. |  |
|  |  | The system should provide the ability for providers to capture clinical document process disposition using standard choices (e.g. reviewed and filed, recall patient, or future follow-up). | Non-Core. |  |
|  |  | The system must provide the ability to capture, maintain and render the clinician's differential diagnosis and the list of diagnoses that the clinician has considered in the evaluation of the patient. | Core. |  |
|  |  | The system must provide the ability to render clinical documentation using an integrated charting or documentation tool (e.g. notes, flow-sheets, radiology views, or laboratory views). | Core. |  |
|  |  | The system must provide the ability to capture clinical documentation using specialised charting tools for patient-specific requirements (e.g. age - neonates, paediatrics, geriatrics; condition - impaired renal function; medication, forensic charting for oral health). | Core |  |
|  |  | The system should provide the ability to capture, maintain and render transition-of-care related information according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  |  | The system must provide the ability to tag the status of clinical documentation (e.g. preliminary, final, signed). | Core. |  |
|  |  | The system must provide the ability to tag and render lists of patients requiring follow up contact (e.g. laboratory call-backs, radiology call-backs, left without being seen (LWBS), oral health follow-ups and reminders). | Core. |  |
|  |  | The system must provide the ability to capture patient follow-up contact activities (e.g. laboratory call-backs, radiology call-backs, LWBS). | Core. |  |
|  |  | The system must provide the ability to save partially completed clinical documentation (i.e. without signature) for later editing and completion. | Core. |  |
|  |  | The system must render partially completed clinical documentation only to the authorised users (i.e. the author and author's supervisors). | Core. |  |
|  |  | The system must provide the ability to tag unsigned and partially completed clinical documentation. | Core. |  |
|  |  | The system must render a notification at specified intervals to the author of partially completed clinical documentation. | Core. |  |
|  |  | The system must be able to record and represent reported, assessed and measured observations, including scales, measures and scores. | Core. |  |
|  |  | The system should be able to record and represent opinions, suggestions and hypotheses. | Non-Core. |  |
|  |  | The system should be able to record and represent intentions, goals and care plans. | Non-Core. |  |
|  |  | The system must be able to record and represent actions considered, planned or performed. | Core. |  |
|  |  | The system should be able to record and represent concerns, risks, alerts, precautions or warnings about situations to be avoided or activities not to be performed in the future. | Non-Core. |  |
|  |  | The system must be able to record and represent preventative and wellness information such as health assessments, prophylaxis measures and lifestyle. | Core. |  |
|  |  | The system should provide the ability that a provider may capture the rationale for clinical decisions, including attribution to care plans, knowledge databases, bibliographic references or decision support systems. | Non-Core. |  |
|  |  | The system must provide the ability to an author of clinical notes to explain or justify his or her reasoning or assertions. | Core. |  |
|  |  | The system should provide the option to an author of clinical notes to reference external sources as the basis for a conclusion or strategy, such as a guideline, care plan, published paper or Standard Operating Procedures (SOPs) and DOD policies. | Non-Core. |  |
|  |  | The system must provide the ability for the author to include a free-text comment per EHR entry. | Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Clinical Information. 🡪 Clinical Documentation. 🡪 **Other Provider Documentation.** | The system must provide the ability to manage other-provider documentation. Other-provider documentation includes notes from physicians, nurses, technicians and other healthcare team members. It may be scanned, reviewed, annotated for disparities, added to/amended, and imported when required and permitted. | Core. |  |
|  |  | The system should provide the ability to tag documentation by another clinician as being read according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  |  | The system should provide the ability to tag agreement or disagreement with documentation by another provider according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  |  | The system should provide the ability for a user (e.g. supervising clinician) to annotate regarding his/her role in advising, and/or providing direct care according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  |  | The system must provide the ability to capture and render a co-signature (electronic signature) of documentation according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to capture the approval of documentation that was captured by another user according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Clinical Information. 🡪 Clinical Documentation. 🡪 **Clinical Images.** | The system must provide the ability to manage clinical images. Clinical Images are rendered either by radiology or by providers in other clinical areas that make use of imaging devices (e.g. a cardiology unit that extensively uses echocardiography; obstetrics and gynaecology that use ultrasound; and the use of ultrasound and x-rays as an adjunct to endoscopy for diagnostics and therapeutics). | Core. |  |
|  |  | The system must provide the ability to associate clinical images (as stored on the system) with their accompanying reports. | Core. |  |
|  |  | The system must provide the ability to zoom in/enlarge, pan, tilt and rotate clinical images. | Core. |  |
|  |  | The system must provide the ability to take measurements on clinical images. | Core. |  |
|  |  | The system must be able to store and display high quality clinical images in accordance with Digital Imaging and Communication in Medicine (DICOM). | Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Clinical Information. 🡪 Clinical Documentation. 🡪 **Research Participation Care.** | The system should provide the ability to manage research participant care. Research participant care is patient-specific care for, and tracking of, individuals who participate in research studies. CDS is provided for this function in the form of protocols for such patients. | Non-Core. |  |
|  |  | The system should provide the ability to present protocols for patients enrolled in research studies. | Non-Core. |  |
|  |  | The system should provide the ability to capture, maintain and render research study protocols. | Non-Core. |  |
|  |  | The system should provide the ability to identify and track patients participating in research studies. | Non-Core. |  |
|  |  | The system should provide the ability to capture and maintain appropriate details of patient condition and response to treatment as required for patients enrolled in research studies. | Non-Core. |  |
|  |  | The system should capture, maintain and render research subject disposition information including date/time and trial phase/cycle of study, and study completion/discontinuation as distinct elements. | Non-Core. |  |
|  |  | The system should determine patients eligible for known active clinical research protocols as defined by inclusion and exclusion criteria of the research instance. | Non-Core. |  |
|  |  | The system should present information notifying staff of patient's eligibility for known active clinical research protocols as defined by inclusion and exclusion criteria of the research instance. | Non-Core. |  |
|  |  | The system should capture research protocol deviation information, including any verbatim text of protocol deviation. | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Clinical Information. 🡪 **Self-care.** | The system must provide the ability to manage self-care. Self-care is about providing a patient with the information required for self-care and is facilitated by the patient education and provider-patient communication functions as described at the Care Support function. Patient education and provider-patient communication functions are part of decision support and communication, respectively. | Core. |  |
|  |  | The system must provide the ability to capture, maintain and render patient guidelines, protocols and reminders related to specific clinical conditions. | Core. |  |
|  |  | The system should provide the ability to determine patient eligibility for, and render appropriate patient guidelines, protocols, and reminders for self-management of clinical conditions. | Non-Core. |  |
|  |  | The system should provide the ability to identify and manage patient-originated data. | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Clinical Information. 🡪 **Problems and Trends Identification.** | The system must provide the ability to manage problems and trends identification. Problems and trends identification function must identify and tag (during any collection of personal health information): potential clinical problems and trends that may be condition- or patient-specific (given an individual's health profile); and changes that warrant further assessment. It must generate prompts, notifications, and alerts to providers for specific clinical concerns. This function is a cornerstone of CDS and is used by other interactive clinical information functions. It is also used by non-interactive functions of population care that evaluate patient information *en masse*. | Core. |  |
|  |  | The system must provide the ability to access standard assessment data in the patient record. | Core. |  |
|  |  | The system should provide the ability to present health standards and practices according to RSA industry standards, scope of practice at the time of the encounter. | Non-Core. |  |
|  |  | The system should provide the ability to analyse patient context-driven assessments and additional health information against best practices in order to identify patient-specific growth or development patterns, health trends and potential health problems. | Non-Core. |  |
|  |  | The system should provide the ability to manage rules for defining trends. | Non-Core. |  |
|  |  | The system should present the provider with trends based on patient contextual health information. | Non-Core. |  |
|  |  | The system must provide the ability to render laboratory data in numerical (tabular or spreadsheet) form over time to enable trend analysis. | Core. |  |
|  |  | The system must provide the ability to render laboratory data in graphical form over time to enable trend analysis. | Core. |  |
|  |  | The system should provide the ability to integrate the laboratory result trends with items from the Problem List and other items such as vital signs. | Non-Core. |  |
|  |  | The system should provide the ability to render prescription timelines (i.e. events related to a prescription from order to administration) in graphic form over time to enable trend analysis. | Non-Core. |  |
|  |  | The system should present the provider with information that may prompt an order for additional assessments, testing or adjunctive treatment. | Non-Core. |  |
|  |  | The system should provide the ability to integrate or link health information contained in the patient record with appropriate patient education materials. | Non-Core. |  |
|  |  | The system must provide the ability to tag an individual patient's conditions of clinical interest. | Core. |  |
|  |  | The system must provide the ability to maintain and render the list of individual patient's conditions of clinical interest that have been tagged. | Core. |  |
|  |  | The system should provide the ability to create a configurable notification for tagged conditions of clinical interest. | Non-Core. |  |
|  |  | The system must provide the ability to render details on the patient's conditions of clinical interest that have been tagged. | Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Clinical Information. 🡪 **Information Quality.** | The system should provide the ability to manage information quality. Information quality must support grammatical and lexical integrity of the health record with medical spelling, thesaurus, grammar-ready assistance, and shortcuts for pre-defined text (which may be configured by provider type) during clinical documentation. Shortcuts can also trigger specific system functions such as opening pre-defined templates. | Non-Core. |  |
|  |  | The system should determine and present the correct medical spelling based on an integrated realm-based medical spelling function. | Non-Core. |  |
|  |  | The system should determine and present the correct medical thesaurus based on an integrated realm-based medical thesaurus function. | Non-Core. |  |
|  |  | The system should determine and present the correct medical grammar based on an integrated realm-based medical grammar function. | Non-Core. |  |
|  |  | The system should determine and present the appropriate pre-defined text when an associated shortcut is entered during clinical documentation. | Non-Core. |  |
|  |  | The system should determine and present personally pre-defined text when triggered by the associated macro based on an integrated personally pre-defined-text function. | Non-Core. |  |
|  |  | The system should provide the ability to manage shortcut for the insertion of templates (e.g. insert new patient assessment template when Ctrl-A is entered). | Non-Core. |  |
|  |  | The system should determine and present the appropriate template when the associated shortcut is entered. | Non-Core. |  |
|  |  | The system should provide the ability to manage an integrated enterprise pre-defined text function and associated macros. | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 **Administering.** | Administering refers to the administration of treatment, and the safe administration of medication and immunisation, to a patient, based on medical requirement and orders. The system must provide the ability to manage administering. | Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Administering. 🡪 **Medication Administration.** | Medication administration is the administration of medication therapies (e.g. chemotherapy) to a patient, which are administered by a provider rather than the patient.  CDS must be used to prevent medication errors at the time of administration, and includes the following:   1. Administration instructions, etc. 2. Checks for drug-drug or other interactions. 3. Alerts for potential administration errors (e.g. wrong patient, wrong drug, wrong dose, wrong route and wrong time). 4. Support workflow for medication administration through prompts and reminders regarding the “window” for timely administration of medications.   Workflow must be used, *inter alia*, to ensure timeliness of medication administration, and reporting to health authorities when applicable (e.g. oncology-related medication orders are recorded in a cancer registry). | Core. |  |
|  |  | The system must provide the ability to render the list of medications that are to be administered. | Core. |  |
|  |  | The system must provide the ability to render the list of medications that are to be administered including all administration directions/instructions (SIG). | Core. |  |
|  |  | The system must provide the ability to render medications as dispensed (including dose and quantity of dispensed units of medication). | Core. |  |
|  |  | The system must provide the ability to tag the medications that are to be administered by the patient (i.e. self-administered). | Core. |  |
|  |  | The system must provide the ability to render the drug, dose, route, time and frequency of desired administration for all scheduled medications. | Core. |  |
|  |  | The system should provide the ability to render a notification to the clinician when specific doses are due. | Non-Core. |  |
|  |  | The system should provide the ability to render a notification when medication related activities are due (e.g. adjusting medication dosing based on patient condition, checking IV lines for infiltration). | Non-Core. |  |
|  |  | The system must provide the ability to determine and render allergies, drug-drug interactions, and other potential adverse reactions, when rendering medication administration information. | Core. |  |
|  |  | The system should provide the ability to determine and render other potential adverse reactions, when rendering medication administration information. | Non-Core. |  |
|  |  | The system must provide the ability to capture and maintain the medication identification number of the drug administered to the patient (e.g. National Drug Code (NDC) number, lot numbers, expiration date). | Core. |  |
|  |  | The system must provide the ability to capture, maintain and render medication administration details as distinct data in the patient record according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law, including:   1. Medication name, strength and dose. | Core. |  |
|  |  | 1. Date and time of administration. | Core. |  |
|  |  | 1. Encounter. | Core. |  |
|  |  | 1. Route and site. | Core. |  |
|  |  | 1. Administering provider. | Core. |  |
|  |  | 1. Observations, reactions and complications. | Core. |  |
|  |  | 1. Reason medication not given, and/or medication related activity not performed. | Core. |  |
|  |  | The system should provide the ability to capture the effectiveness of *Pro Re Nata* (PRN)/"as needed" doses after they have been administered. | Non-Core. |  |
|  |  | The system should provide the ability to render any clinical interventions or assessments required prior to medication administration. | Non-Core. |  |
|  |  | The system should provide the ability to render any clinical interventions or assessments required subsequent to medication administration. | Non-Core. |  |
|  |  | The system should provide the ability to securely link medication-related activities to the unique identity of the patient (e.g. verification of administration to correct patient). | Non-Core. |  |
|  |  | The system must provide the ability to capture the identification of medication samples dispensed, including lot number and expiration date. | Core. |  |
|  |  | The system should support integrated PoC devices for patient and medication identification, such as barcode or QR code recognition verification of patients and medications. | Non-Core. |  |
|  |  | The system must provide the ability to render medication orders that have not been dispensed. | Core. |  |
|  |  | The system should provide the ability to render medication orders that have not been administered. | Non-Core. |  |
|  |  | The system should render an alert, when rendering administration information, if a maximum individual or daily dose exists and further administration would cause these to be exceeded (e.g. in the case of a PRN order with weight-based or Body Surface Area (BSA)-based dose limits). | Non-Core. |  |
|  |  | The system should provide the ability to render medications to be administered over a selectable date/time range. | Non-Core. |  |
|  |  | The system must provide the ability to render the medication administration history including administering provider, date, time, location and encounter. | Core. |  |
|  |  | The system should provide the ability to render continuous infusions in a manner that distinguishes them from other distinct dose medications (e.g. insulin drip versus subcutaneous insulin dose). | Non-Core. |  |
|  |  | The system should provide the ability to render PRN ("as needed") medications in a manner that distinguishes them from other medications. | Non-Core. |  |
|  |  | The system should provide the ability to annotate an individual scheduled medication dose and include the annotation as part of the legal medical record. (e.g. describe the dose to be administered based upon specific clinical indicators such as a sliding scale insulin order where the dose is based upon the patient’s current blood sugar level). | Non-Core. |  |
|  |  | The system should provide the ability to render the medication order as written (i.e. exact clinician order language) when rendering administration information. | Non-Core. |  |
|  |  | The system should provide the ability to capture and render patient-specific instructions or other free text related to the administration of the medication (e.g. use left-arm IV only). | Non-Core. |  |
|  |  | The system should provide the ability to manage information regarding a second provider witness to co-document administration. | Non-Core. |  |
|  |  | The system should provide the ability to capture the documentation of medication administration using a barcode scanner or imaging scanner (e.g. scanner capable of reading two-dimensional symbology such as QR code scanner). | Non-Core. |  |
|  |  | The system should provide the ability to render an alert to the administering provider when an electronic identification device (e.g. barcode & scanner, QR code & scanner) is used to document the administration of the medication and one of the following is in error: right patient, right medication, right dose, right time, or right route or there has not been positive identification of the administering provider. | Non-Core. |  |
|  |  | The system should provide the ability to manage medication administration schedules on the record of medication administration - to allow user to adjust future authorised schedule as needed (e.g. delay, refused, unavailable). | Non-Core. |  |
|  |  | The system should provide the ability to render a notification of changes in schedules on the record of medication administration, to associated systems (e.g. pharmacy/ dispensary, ordering, food and nutrition services). | Non-Core. |  |
|  |  | The system should provide the ability to capture an acknowledgement from a user that a medication order has been reviewed including capturing the date, time and user credentials. | Non-Core. |  |
|  |  | The system should provide the ability to capture documentation of medication administration prior to pharmacy review. | Non-Core. |  |
|  |  | The system should provide the ability to capture, maintain and render as part of the medication administration record for infusions, the actual date and times of the infusion including the start and stop times and any modifications to the infusion and the assessment status of the infusion. | Non-Core. |  |
|  |  | The system should auto-populate the medication administration record as a by-product of verification of administering provider, patient, medication, dose, route and time according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  |  | The system should provide the ability to capture, maintain, and present physiological parameters or task completion that must be checked and recorded prior to medication administration. | Non-Core. |  |
|  |  | The system should provide the ability to capture and maintain documentation that the right patient, right medication, right dose, right time, and right route were verified (e.g. using positive identification technology such as bar code scanning) at the time of administration. | Non-Core. |  |
|  |  | The system must provide the ability to render a medication unique identifier (e.g. NDC or other standard product identifiers) according to jurisdictional law. | Core. |  |
|  |  | The system should determine and render notifications regarding potential administration errors such as wrong patient, wrong drug, wrong dose, wrong route and wrong time as it relates to medication administration at the point of medication administration. | Non-Core. |  |
|  |  | The system should determine and render reminders regarding the date/time range for timely administration of medications. | Non-Core. |  |
|  |  | The system should determine and render recommendations for alternative medication administration techniques based on age, developmental stage, weight, physiological status, mental status, educational level, and past physical history of the patient. | Non-Core. |  |
|  |  | The system should provide the ability to enable access to external medication guidance (e.g. drug monograph or package insert information). | Non-Core. |  |
|  |  | The system should provide the ability to determine and render medication screening alerts from the electronic record of medication administration. | Non-Core. |  |
|  |  | The system should provide the ability to link to reference information/knowledge resources at the time of medication administration. | Non-Core. |  |
|  |  | The system should determine and render relevant laboratory results (e.g. serum creatinine level for medication metabolised by the renal system) during medication ordering or administration. | Non-Core. |  |
|  |  | The system should enable linkage of research medication within regulated timelines as prompted by relevant investigator permission, and in accordance with RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Administering. 🡪 **Immunisation Administration.** | The system must provide the ability to manage immunisation administration. Immunisation administration is the administration of immunisation to a patient by a provider. Providers check allergen and adverse reaction histories prior to immunisation and, during the encounter, must be able to view on the system, recommendations based on accepted immunisation schedules. Date administered, type, expiration date, manufacturer, lot number, and allergic or adverse reactions are recorded. This function includes the use of a barcode/QR code scanners to capture vaccine information.  CDS is used to prevent immunisation errors at the time of administration, and includes the following:   1. Alerts for potential administration errors (e.g. wrong patient, wrong drug, wrong dose, wrong route and wrong schedule). 2. Support workflow for immunisation administration through prompts and reminders regarding the “window” for timely administration of immunisations.   Workflow must be used, *inter alia*, to ensure timeliness of immunisation administration, and reporting to health authorities when applicable. | Core. |  |
|  |  | The system must provide the ability to capture immunisation administration details as distinct data according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law, including:   1. Immunisation name/type, series, strength and dose. | Core. |  |
|  |  | 1. Date and time of immunisation administration. | Core. |  |
|  |  | 1. Manufacturer, lot number, expiration date. | Core. |  |
|  |  | 1. Route and site of administration. | Core. |  |
|  |  | 1. Administering provider. | Core. |  |
|  |  | 1. Encounter. | Core. |  |
|  |  | 1. Location of encounter. | Core. |  |
|  |  | 1. Observations, reactions and complications. | Non-Core. |  |
|  |  | 1. Reason immunisation not given, and/or immunisation related activity not performed. | Non-Core. |  |
|  |  | The system should auto-populate the immunisation administration record as a by-product of verification of administering provider, patient, medication, dose, route and time according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  |  | The system must provide the ability to determine and render required immunisations, and when they are due, based on widely accepted immunisation schedules, when rendering encounter information. | Core. |  |
|  |  | The system must provide the ability to capture, in a distinct field, an allergy/adverse reaction to a specific immunisation as part of the patient’s allergy/adverse reaction list. | Core. |  |
|  |  | The system must provide the ability to capture clinical data related to the immunisation administration (e.g. vital signs). | Core. |  |
|  |  | The system must provide the ability to link an immunisation to a procedure code standard codes (or other jurisdictionally-specific codes) with distinct data elements associated with an immunisation. | Core. |  |
|  |  | The system must provide the ability to maintain a patient-specific immunisation schedule. | Core. |  |
|  |  | The system must provide the ability to render a patient's immunisation history upon request for appropriate authorities such as schools or day-care centers. | Core. |  |
|  |  | The system should transmit required immunisation administration information to a public health immunisation registry according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  |  | The system should exchange immunisation histories with public health immunisation registries or Immunisation Information Systems according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  |  | The system should provide the ability to harmonise Immunisation histories with a public health immunisation registry or Immunisation information Systems according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  |  | The system should capture and render immunisation histories from a public health immunisation registry or Immunisation Information Systems including immunisation administration recommendations. | Non-Core. |  |
|  |  | The system must provide the ability to update immunisation histories at the time of capturing an immunisation administration. | Core. |  |
|  |  | The system should provide the ability to render an immunisation order as written (e.g. exact clinician order language or as mandated - such as by a public health requirement), when rendering administration information. | Non-Core. |  |
|  |  | The system should provide the ability to determine due and overdue ordered immunisations including earliest through latest date ranges and render a notification according to organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  |  | The system should provide the ability to render a patient educational information regarding the administration (e.g. Vaccine Information Statement (VIS)). | Non-Core. |  |
|  |  | The system should provide the ability to capture that patient educational information (e.g. VIS) was provided at the time of the immunisation, including to whom the information was provided and the date/time that it was provided. | Non-Core. |  |
|  |  | The system must provide the ability to capture and maintain immunisation refusal reasons as distinct data. | Core. |  |
|  |  | The system should provide the ability to capture patient preferences regarding receipt of immunisation (e.g. refusal of certain vaccines) at time of immunisation administration. | Non-Core. |  |
|  |  | The system should determine and render notifications regarding potential administration errors such as wrong patient, wrong drug, wrong dose, wrong route and wrong time as it relates to immunisation administration at the point of immunisation administration, e.g. by using positive identification technology such as bar code scanning at the time of administration. The bidder to indicate which technology is used for positive patient identification in this context. | Non-Core. |  |
|  |  | The system must determine and render reminders regarding the date/time range for timely administration of immunisations. | Core. |  |
|  |  | The system should provide the ability to capture the date/time range for due/overdue immunisation reminders according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  |  | The system should determine and render recommendations for alternative immunisation administration techniques based on age, developmental stage, weight, physiological status, mental status, educational level and past physical history of the patient. | Non-Core. |  |
|  |  | The system should provide the ability to access to external immunisation guidance. | Non-Core. |  |
|  |  | The system should determine and render physiological parameters or task completion that must be checked and recorded prior to immunisation administration. | Non-Core. |  |
|  |  | The system should provide the ability to determine and render immunisation screening alerts from the electronic record of immunisation administration. | Non-Core. |  |
|  |  | The system should provide the ability to link to reference information/knowledge resources at the time of immunisation administration. | Non-Core. |  |
|  |  | The system should determine and render potential adverse or allergic reactions (based on the patient's allergen history and adverse reaction history) for all immunisations when rendering immunisation administration information. | Non-Core. |  |
|  |  | The system should determine and present recommendations for required immunisations based on patient risk factors. | Non-Core. |  |
|  |  | The system should provide the ability to analyse immunisation histories from multiple sources for reconciliation (e.g. align history imported from Immunisation Information System and local history). | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Administering. 🡪 **Treatment Administration.** | The system must provide the ability to manage treatment administration. Treatment administration is the administration of non-medication clinical treatment to a patient for a disease or injury (e.g. therapy, wound dressing requiring use of a topical cream or sterile wash, etc). It is based on clinical requirements and provider orders. The function must present the provider with the list of treatments to be administered and administration information. Administration details must be recorded. | Core. |  |
|  |  | The system should provide the ability to render the list of treatments that are to be administered within a specified time frame and including all administration directions/instructions per patient as well as per facility and per provider. | Non-Core. |  |
|  |  | The system should provide the ability to render all medications associated with the treatment as given or administered (including dose and quantity of dispensed units of medication). | Non-Core. |  |
|  |  | The system should provide the ability to tag the treatments that are to be administered by the patient (i.e. self-administered). | Non-Core. |  |
|  |  | The system should provide the ability to render the information necessary to administer the treatment (e.g. body site, time and frequency). | Non-Core. |  |
|  |  | The system should provide the ability to document multiple body sites of desired administration for all scheduled treatments. | Non-Core. |  |
|  |  | The system should provide the ability to render a notification when treatments are due. | Non-Core. |  |
|  |  | The system must provide the ability to capture, maintain and render details associated with the treatment as distinct data according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law, including:   1. Treatment. | Core. |  |
|  |  | 1. Date and time of treatment. | Core. |  |
|  |  | 1. Site. | Core. |  |
|  |  | 1. Administering provider. | Core. |  |
|  |  | 1. Observations. | Core. |  |
|  |  | 1. Reactions and complications. | Core. |  |
|  |  | 1. Reason treatment not given, and/or related activity not performed. | Core. |  |
|  |  | The system should provide the ability to capture, maintain and render details associated with continuous treatments (e.g. infusions, tube feedings, bladder irrigations, suction levels). | Non-Core. |  |
|  |  | The system should provide the ability to capture, maintain and render details associated with treatments (including routinely scheduled, "one-time", "on-call" and "PRN") in a manner that distinguishes them from other types of treatments according to RSA industry standards, scope of practice. | Non-Core. |  |
|  |  | The system should provide the ability to capture information regarding the effectiveness of treatment at the time of administration of the treatment (e.g. patient's immediate response to bronchodilator therapy). | Non-Core. |  |
|  |  | The system should provide the ability to render any clinical interventions or assessments required prior to the treatment. | Non-Core. |  |
|  |  | The system should provide the ability to render any clinical interventions or assessments required subsequent to the treatment. | Non-Core. |  |
|  |  | The system should provide the ability to capture verification of patient identity prior to administration of the treatment. | Non-Core. |  |
|  |  | The system should provide the ability to capture verification of patient identity using integrated PoC devices (e.g. barcode, QR Code) prior to administration of the treatment. | Non-Core. |  |
|  |  | The system should provide the ability to render treatment orders that have not been administered. | Non-Core. |  |
|  |  | The system should provide the ability to render treatments to be administered over a selectable date/time range. | Non-Core. |  |
|  |  | The system must provide the ability to render the treatment administration history including administering provider date and time. | Core. |  |
|  |  | The system should provide the ability to render prior treatment history (including treatment assessment data and patient response) prior to the administration of the treatment. | Non-Core. |  |
|  |  | The system should provide the ability to annotate an individual scheduled treatment and include the explanation as part of the legal medical record (e.g. describe the treatment to be administered based upon specific clinical indicators). | Non-Core. |  |
|  |  | The system should provide the ability to render the treatment order as written (i.e. exact clinician order language) when rendering treatment specific information including special instructions. | Non-Core. |  |
|  |  | The system should provide the ability to capture and render patient-specific instructions related to the treatment. | Non-Core. |  |
|  |  | The system must provide the ability to manage information regarding a second provider witness to co-document treatment. | Core. |  |
|  |  | The system should provide the ability to capture the documentation of treatment administration using a barcode scanner or imaging scanner (e.g. scanner capable of reading two-dimensional symbology such as QR Code). | Non-Core. |  |
|  |  | The system should provide the ability to render an alert to the administering provider when an electronic identification device (e.g. barcode & scanner, QR Code & scanner) is used to document treatment and one of the following is in error: right patient, right treatment, right time and right method or there has not been positive identification of administering provider. | Non-Core. |  |
|  |  | The system should provide the ability to manage treatment schedules (e.g. adjustments for delay, refused, unavailable). | Non-Core. |  |
|  |  | The system should provide the ability to render a notification of a change in the treatment schedule. | Non-Core. |  |
|  |  | The system should provide the ability to auto-populate details associated with the treatment administration from the treatment order information. | Non-Core. |  |
|  |  | The system should provide the ability to capture that patient educational information was provided at the time of the treatment including to whom the information was provided. | Non-Core. |  |
|  |  | The system must provide the ability to capture other clinical data relevant to the treatment (e.g. vital signs, blood glucose reading). | Core. |  |
|  |  | The system must provide the ability to capture that a treatment has not been administered including the reason for not administering (e.g. patient refusal). | Core. |  |
|  |  | The system must provide the ability to exchange treatment information with other related systems (e.g. pharmacy/dispensary, laboratory). | Core. |  |
|  |  | The system should provide the ability to capture the patient's preferences regarding receipt of treatment (e.g. refusal of certain materials/supplies) at the time of treatment administration. | Non-Core. |  |
|  |  | The system should capture and maintain system user preferences for how the list of treatments are rendered. | Non-Core |  |
|  |  | The system must provide the ability to upload/capture a photo e.g. wound care treatment progress. System must trigger patient informed consent warning before capturing any images. | Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Administering. 🡪 **Blood Administration.** | The system must provide the ability to manage blood administration. To reduce errors at the time of blood product administration, this function must assist in positive patient identification, with CDS-based checks and alerts (which are aimed at safe blood administration) regarding the blood product to be administered, including the identification of the blood product, the amount to be delivered, and the route and time of the administration. | Core. |  |
|  |  | The system must present, at the time of blood administration, information necessary to correctly identify the patient and accurately administer blood products including:   1. Patient name. | Core. |  |
|  |  | 1. Blood product number. | Core. |  |
|  |  | 1. Amount of blood. | Core. |  |
|  |  | 1. Blood administration route. | Core. |  |
|  |  | 1. Product expiration date. | Core. |  |
|  |  | 1. Time of administration. | Core. |  |
|  |  | 1. Encounter. | Core. |  |
|  |  | 1. Encounter location. | Core. |  |
|  |  | The system must provide the ability to capture validation of the correct matching of the patient to the blood product. | Core. |  |
|  |  | The system must provide the ability to capture:   1. The blood product number. | Core. |  |
|  |  | 1. Amount of blood. | Core. |  |
|  |  | 1. Route of administration. | Core. |  |
|  |  | 1. Time of administration. | Core. |  |
|  |  | 1. Encounter. | Core. |  |
|  |  | 1. Encounter location. | Core. |  |
|  |  | The system must provide the ability to capture the blood pressure, temperature, pulse and respiration rate of the patient receiving the product. | Core. |  |
|  | Patient Care. 🡪 Patient Care Provision 🡪 Administering 🡪 **Specimen Collection** | The system must provide the ability to manage specimen collection. To ensure specimen collection accuracy, this function must positively identify the patient and specimen, and must notify the provider in real-time of potential collection errors such as wrong patient, wrong specimen type, wrong means of collection, wrong site, and wrong date and time. Procedures for packaging and transport of specimen must be enforced through decision support and workflow functions. | Core. |  |
|  |  | The system must provide the ability to render information necessary to correctly identify the patient and accurately identify the specimen to be collected including, but not limited to:   1. Patient name. | Core. |  |
|  |  | 1. Specimen type. | Core. |  |
|  |  | 1. Specimen source. | Core. |  |
|  |  | 1. Means of specimen collection. | Core. |  |
|  |  | 1. Date and time of specimen collection. | Core. |  |
|  |  | The system should provide the ability to determine and render variations between the type of specimen order placed and the actual specimen collected. | Non-Core. |  |
|  |  | The system must provide the ability to capture the details of specimen collection. | Core. |  |
|  |  | The system should render, at the time of specimen collection, information notifying the provider of a variation between the type of specimen order placed and the actual specimen collected. | Non-Core. |  |
|  |  | The system must provide the ability to the provider to capture the quality of specimen collected. | Core. |  |
|  |  | The system must provide the ability to generate and print barcoded labels /QR Code labels for marking of specimen collected. Label information must be linked to the relevant specimen collection encounter. | Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 **Future Care.** | The system must provide the ability to support future care. | Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Future Care. 🡪 **Care Plans.** | The system must provide the ability to manage care/treatment plans and rehabilitation/therapy programs.  Care plans/treatment plans and rehabilitation/therapy programs, enable future care, and are aimed at the lifetime care of a patient. This function must use guidelines and protocols and must include recommendations for future care; recommendations for post-encounter care; recommendations for rehabilitation programs and linking of recommendations to other items such as problem lists. It must also enable tracking of implementation or approval dates.  CDS must be provided for care plans in the following ways.   1. Guidelines, protocols, clinical pathways and SOPs (which are used for care planning and during provision of care). 2. Standard care plans. 3. Templates and forms for care plans. 4. Context-sensitive care plans (based on patient-specific information, e.g. age, gender, health profile, site-specific considerations, etc). 5. Relevance to specific domains and context.   Note that a care plan’s objective is to manage healthcare activities for a patient, and often focuses on healthcare problems. It must record ordered, expected or planned activities, including observations, goals, services, appointments and procedures, usually organised in phases. It may include order sets as actionable elements. | Core. |  |
|  |  | The system must provide the ability to manage patient-specific care and treatment plans. | Core. |  |
|  |  | The system must provide the ability to manage patient-specific rehabilitation/therapy programs. | Core. |  |
|  |  | The system should provide the ability to render locally or non-locally developed templates, guidelines, and protocols for the creation of patient-specific care and treatment plans. | Non-Core. |  |
|  |  | The system should provide the ability to render locally or non-locally developed templates, guidelines, protocols, and completed therapy programs for the creation of patient-specific rehabilitation/therapy programs (including neurology and orthopaedic rehabilitation programs). | Non-Core. |  |
|  |  | The system must provide the ability to capture metadata regarding a patient's plan of care or treatment, according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law:   1. Authors. | Core. |  |
|  |  | 1. Creation date. | Core. |  |
|  |  | 1. Version history. | Core. |  |
|  |  | 1. References. | Non-Core. |  |
|  |  | 1. Local sources. | Non-Core. |  |
|  |  | 1. Non-local sources. | Non-Core. |  |
|  |  | The system must provide the ability to capture metadata regarding a patient's rehabilitation program, according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law:   1. Authors. | Core. |  |
|  |  | 1. Creation date. | Core. |  |
|  |  | 1. Version history. | Core. |  |
|  |  | 1. References. | Non-Core. |  |
|  |  | 1. Local sources. | Non-Core. |  |
|  |  | 1. Non-local sources. | Non-Core. |  |
|  |  | The system should provide the ability to link order sets with care plans. | Non-Core. |  |
|  |  | The system should provide the ability to link order sets with rehabilitation programs. | Non-Core. |  |
|  |  | The system should provide the ability to link the care plan with condition(s) in problem lists of the patient. | Non-Core. |  |
|  |  | The system should provide the ability to link the rehabilitation program with condition(s) in problem lists of the patient. | Non-Core. |  |
|  |  | The system should provide the ability to determine and render order sets from care plans. | Non-Core. |  |
|  |  | The system should provide the ability to determine and render order sets from rehabilitation programs. | Non-Core. |  |
|  |  | The system should provide the ability to determine and render care plans from order sets. | Non-Core. |  |
|  |  | The system must provide the ability to transmit care plans and treatment plans to other care providers. | Core. |  |
|  |  | The system must provide the ability to transmit rehabilitation programs to other care providers. | Core. |  |
|  |  | The system should provide the ability to link care plan items into the tasks assigned and routed. | Non-Core. |  |
|  |  | The system must provide the ability to link care plan items and tasks. | Core. |  |
|  |  | The system must provide the ability to link care plan items with tasks tracked. | Core. |  |
|  |  | The system must provide the ability to determine and render related warnings on drug dosing and interactions. | Core. |  |
|  |  | The system should provide the ability to capture, maintain and render, as distinct data, the reason for variation from rule-based clinical messages (e.g. alerts and reminders). | Non-Core. |  |
|  |  | The system should provide the ability to capture that a patient should not be on a generally recommended care plan and the reason why. | Non-Core. |  |
|  |  | The system should provide the ability to capture that a patient should not be on a generally recommended rehabilitation program and the reason why. | Non-Core. |  |
|  |  | The system should provide the ability to capture care processes across the continuum of care. | Non-Core. |  |
|  |  | The system should provide the ability to render care processes from across the continuum of care. | Non-Core. |  |
|  |  | The system must provide the ability to render internal care plans, guidelines, and protocols according to RSA industry standards and scope of practice. | Core. |  |
|  |  | The system must provide the ability to render internal rehabilitation programs, guidelines, and protocols according to RSA industry standards and scope of practice. | Core. |  |
|  |  | The system should provide the ability to render external care plans, guidelines, and protocols according to RSA industry standards, scope of practice, and/or organisational policy. | Non-Core. |  |
|  |  | The system should provide the ability to render external rehabilitation programs, guidelines, and protocols according to RSA industry standards, scope of practice, and/or organisational policy. | Non-Core. |  |
|  |  | The system should provide the ability to present current guidelines and protocols to providers who are creating plans for treatment and care. | Non-Core. |  |
|  |  | The system should provide the ability to present current guidelines and protocols to providers who are creating programs for rehabilitation. | Non-Core. |  |
|  |  | The system should provide the ability to interface with Biokinetics discipline-specific software (e.g. Exercise Pro software, Technogym Exercise software), to import exercise/rehabilitation programs generated for patients. | Non-Core. |  |
|  |  | The system should provide the ability to render a guideline or protocol based on appropriate criteria (such as problem or medication). | Non-Core. |  |
|  |  | The system must provide the ability to render previously used guidelines and protocols for historical or legal purposes. | Core. |  |
|  |  | The system must provide the ability to keep record of decision support prompts and the provider’s action to accept or override the decision support prompts in instances where decision support prompts are used to support a specific clinical guideline or protocol. | Core. |  |
|  |  | The system should provide the ability to render care and treatment plans that are sensitive to the context of patient data and assessments. | Non-Core. |  |
|  |  | The system should provide the ability to render rehabilitation programs that are sensitive to the context of patient data and assessments. | Non-Core. |  |
|  |  | The system should provide the ability to capture and maintain the choice of action in response to care plan suggestions. | Non-Core. |  |
|  |  | The system should provide the ability to capture and maintain the choice of action in response to rehabilitation program suggestions. | Non-Core. |  |
|  |  | The system should identify, track and provide alerts, notifications and reports about variances from standard care plans, guidelines, protocols and clinical pathways. | Non-Core. |  |
|  |  | The system should identify, track and provide alerts, notifications and reports about variances from standard rehabilitation programs, guidelines, protocols and clinical pathways. | Non-Core. |  |
|  |  | The system should provide the ability to maintain standard choices for disposition (e.g. reviewed and filed, recall patient, or future follow-up). | Non-Core. |  |
|  |  | The system should provide the ability to capture, maintain and render care plan templates to be used as a basis for the creation of new plans of care and treatment. | Non-Core. |  |
|  |  | The system should provide the ability to capture, maintain and render rehabilitation program templates to be used as a basis for the creation of new rehabilitation programs. | Non-Core. |  |
|  |  | The system should provide the ability to capture care plan templates from previously developed care plans. | Non-Core. |  |
|  |  | The system should provide the ability to capture rehabilitation program templates from previously developed rehabilitation programs. | Non-Core. |  |
|  |  | The system must provide the ability to maintain knowledge bases or guidelines deployed in the organisation. | Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Future Care. 🡪 **Care Recommendations.** | The system must provide the ability to manage care recommendations. Care recommendations is the plan for continuing the healthcare of a patient (also referred to as recommendations for future care) after discharge from a healthcare facility, i.e. it consists of the disposition process for a patient. | Core. |  |
|  |  | The system must enable the recording (with supporting information) of applicable patient encounter/treatment end states, e.g. discharge, admission, transfer, death, LWBS, left without treatment (LWOT), left without notifying the facility, left against medical advice (AMA), triaged to another clinic, etc. | Core. |  |
|  |  | The system must provide the ability to obtain patient signature (electronic signature) when the patient refuses treatment. Provision must be made for the provider to sign if the patient declines to sign. | Core. |  |
|  |  | The system must provide the ability to capture recommendations for future care as distinct data elements including the recommending provider and an alert date for the recommendation to take effect. | Core. |  |
|  |  | The system must provide the ability to maintain recommendations and associated recommendation meta-data (e.g. date of alert). | Core. |  |
|  |  | The system should provide the ability to render an alert of the recommendation based on the date associated with the recommendation (e.g. if recommendation is to "book appointment for occupational therapy in 2 weeks" - alert must be triggered in 1.5 weeks for follow-up). | Non-Core. |  |
|  |  | The system should provide the ability to capture recommendations for future care or post-encounter disposition from encounter and diagnostic studies imported in structured documents. | Non-Core. |  |
|  |  | The system must provide the ability to capture recommended actions for future care along with the recommending provider, the date recommended, and the date suggested to carry out the recommendation. | Core. |  |
|  |  | The system must provide the ability to link the recommendation for future care with the original documentation of that recommendation. | Core. |  |
|  |  | The system should provide the ability to link the recommendation with condition(s) on the Problem List of the patient. | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 **Orders.** | Clinical orders pertain to medication, non-medication therapies (e.g. physical therapy, special diet, immunisations, non-allopathic regimens, etc), diagnostic care (e.g. laboratory, radiology), blood products and other biologics (e.g. blood transfusions, human growth hormones), and referrals. Orders are originated, recorded, transmitted, tracked and maintained. Ordered items include detail such as order identification and instructions and clinical info necessary to fulfil the order. New, renewal and discontinuance orders are included. Orders can be placed on both internal and external service providers. Orders form part of the patient’s EHR. | Core. |  |
|  |  | The system must be configurable to provide CDS for orders such as:   1. Alerts to duplicate orders, missing results, and information required to initiate an order. 2. Suggested corollary orders and order sets. 3. Best practice order guidelines, facility-specific order guidelines and diagnosis-specific recommendations. 4. Alerts for orders that are potentially inappropriate or contraindicated for specific patients (e.g. X-rays on pregnant women). | Core. |  |
|  |  | The system must provide the ability to manage role-based, context-based, and/or user-based order entry. | Core. |  |
|  |  | The system must provide the ability to manage the creation, renewal, modification and discontinuation of orders. | Core. |  |
|  |  | The system must provide the ability to render relevant, patient-specific laboratory test results when entering an order. | Core. |  |
|  |  | The system must provide the ability to manage the status of an order (e.g. open, completed, in process). | Core. |  |
|  |  | The system must provide the ability to capture, maintain and render order entry with an appropriate registration process when the identity of the patient is unknown or in an urgent situation. | Core. |  |
|  |  | The system should provide the ability to manage standing orders or orders that may be submitted by providers other than licensed providers according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  |  | The system must provide the ability to capture and render problem/diagnosis as an element of an order. | Core. |  |
|  |  | The system must provide the ability to capture, maintain and render, as distinct data, a diagnosis/problem code, and/or description associated with an order of any type (including prescriptions and medications ordered for administration). | Core. |  |
|  |  | The system must provide the ability to link an order of any type (including medication order) with a related clinical problem(s), and/or diagnosis code(s) and description. | Core. |  |
|  |  | The system must provide the ability to annotate and render comments and instructions with an order. | Core. |  |
|  |  | The system must provide the ability to annotate and render free text comments and instructions with an order (e.g. "Short draw, do complete blood count (CBC) first"). | Core. |  |
|  |  | The system should provide the ability to tag frequently used and institutionally-approved order sets as "favourites" or "preferences" to facilitate retrieval and ordering. | Non-Core. |  |
|  |  | The system should provide the ability to manage orders submitted to or received from external organisations, and/or facilities such as Health Information Exchanges (HIEs) or eHealth systems. | Non-Core. |  |
|  |  | The system must display patient identifying information (e.g. the patient name, identification number, and age or date of birth) on all order screens, according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system should provide the ability to capture, maintain and render an indicator of oral verification ("read-back") of the complete order by the person receiving the telephone or verbal order. | Non-Core. |  |
|  |  | The system must provide the ability to capture and render the urgency status (e.g. As-Soon-As-Possible or STAT (immediately)) associated with an order. | Core. |  |
|  |  | The system must provide the ability to render order history for any order, including the ordering clinician, order details, date, and time. | Core. |  |
|  |  | The system must provide the ability to tag and render a field as required for a complete order by order type (e.g. paediatric order for antibiotic that requires the patient's weight). | Core. |  |
|  |  | The system must provide the ability to tag orders to be activated at a future date and time including admission orders, discharge orders, and post-operative orders. | Core. |  |
|  |  | The system should provide the ability to manage conditional orders that can be activated when certain criteria and conditions are met. | Non-Core. |  |
|  |  | The system must provide the ability to a provider to electronically sign an order using electronic signature functionality. | Core. |  |
|  |  | The system must provide the ability to capture, store and render the identity of all providers who signed an order. | Core. |  |
|  |  | The system must provide the ability to render a list of active orders for a patient. | Core. |  |
|  |  | The system must provide the ability to render a list of orders by similar or comparable type (e.g. all radiology or all laboratory orders). | Core. |  |
|  |  | The system must provide the ability to render outstanding orders for multiple patients, as opposed to outstanding orders for a single patient (e.g. all outstanding orders for a specific clinician or all outstanding orders for a care setting). | Core. |  |
|  |  | The system must provide the ability to capture and transmit the provider's order cancellation request. | Core. |  |
|  |  | The system must provide the ability to communicate between provider and patient and/or patient representative to manage information regarding orders. | Core. |  |
|  |  | The system must provide the ability to determine and capture co-signatures (electronic signatures) for orders based upon roles (e.g. consulting physician) according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to capture the original requisition identification number associated with an order. | Core. |  |
|  |  | The system must provide the ability to link orders with other health record entries (such as symptoms, observations, diagnoses or other clinical indications) that were the rationale for the order. | Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Orders. 🡪 **Order Set Templates.** | The system must provide the ability to manage order set templates. Order set templates are predefined templates for order entry, based on criteria such as best practices, provider preferences, and policy. Providers must have the option to choose common orders for specific circumstances or disease states. The system must provide the ability to recommend a template based on patient data or other contexts and may allow/disallow patient-specific modification of an order (during entry) according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. Order set template functionality is essentially provided by CDS. | Core. |  |
|  |  | The system must provide the ability to capture a set of actions, and/or items to be ordered for a patient using a predefined order set template. | Core. |  |
|  |  | The system must provide the ability to maintain a patient's orders as an order set. | Core. |  |
|  |  | The system must provide the ability to display a patient's orders as an order set. | Core. |  |
|  |  | The system must provide the ability to integrate patient information and order set templates to determine appropriate orders based on patient characteristics (e.g. abdominal pain for female patient of childbearing age would present pregnancy testing order set template). | Core. |  |
|  |  | The system must provide the ability to manage order set templates, including creation from provider input and version control. | Core. |  |
|  |  | The system must provide the ability to capture an order set template based on a specific patient's orders/data according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to manage order set templates created for conditions or diseases. | Core. |  |
|  |  | The system should provide the ability to capture the practice standards or criteria used to create order set templates (e.g. as a note attached to the template). | Non-Core. |  |
|  |  | The system must display order set templates to providers based on diagnoses, conditions, or symptoms to aid decision support. | Core. |  |
|  |  | The system must provide the ability to capture and maintain an order set template containing all order types relevant to a particular problem (e.g. laboratory, radiology, medications, nursing tasks, and materials management). | Core. |  |
|  |  | The system should capture, maintain and render order set templates customised by patient age, gender, or other patient factors. | Non-Core. |  |
|  |  | The system should capture, maintain and render order set templates customised by provider type. | Non-Core. |  |
|  |  | The system should capture, maintain and render order set templates customised by provider. | Non-Core. |  |
|  |  | The system must provide the ability to capture, maintain and render standing order set templates for triage and for specific conditions. | Core. |  |
|  |  | The system should provide the ability to manage links or access to applicable clinical standards and reference materials within an order set. | Non-Core. |  |
|  |  | The system must provide the ability to capture, maintain and render the date that an order set was last modified. | Core. |  |
|  |  | The system should provide the ability to capture, maintain and render order set templates that are pre-configured with order entry information. | Non-Core. |  |
|  |  | The system must provide the ability to capture, maintain and render multiple choices of orders within an order set template for clinician selection. | Core. |  |
|  |  | The system must provide the ability to capture, maintain and render text instructions or recommendations within order sets. | Core. |  |
|  |  | The system must provide the ability to capture a name for an order set. | Core. |  |
|  |  | The system must provide the ability to display order set(s) by name. | Core. |  |
|  |  | The system should provide the ability to render orders in the same manner regardless of the manner in which they were ordered (individually or from within an order set). | Non-Core. |  |
|  |  | The system should provide the ability to integrate order sets within other order sets. | Non-Core. |  |
|  |  | The system must determine and render drug-drug interaction and drug-allergy reaction checking to orders placed through an order set in the same way as orders placed individually. | Core. |  |
|  |  | The system must provide the ability to render reports on the use of order sets, including such data as orders, ordering provider, date/time ordered, basic patient data (e.g. demographics), and condition(s) being treated. | Core. |  |
|  |  | The system must provide the ability to capture, maintain and render order sets that allow or disallow individual orders to be selected or deselected by the user (e.g. standing orders that cannot be modified during care provision). | Core. |  |
|  |  | The system must provide the ability to determine and render the appropriate order set template based on disease, care setting, conditions, symptoms or medications. | Core. |  |
|  |  | The system must provide the ability to capture and integrate in an order set, various types of orders for a patient (e.g. medications, laboratory tests, imaging studies, procedures and referrals). | Core. |  |
|  |  | The system must provide the ability to tag as deleted an individual order(s) from an instance of an order set for an individual patient according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system should provide the ability to integrate multiple order set templates, customizing and storing it as a new order set template according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  |  | The system should provide the ability to link order set(s) with condition(s) on the patient's problem list. | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Orders. 🡪 **Medication Orders.** | The system must provide the ability to manage medication orders. Medication orders primarily involve creating prescriptions or other medication orders. Types of medication must include prescribed and OTC drugs, allergy shots, oxygen, anaesthetics, chemotherapy, and dietary supplements. Instructions for administration or patient instructions must be selected or created by ordering providers, and common content must be created for prescription details. Time stamps must be generated for all medication related activity, including a series of orders that are part of a therapeutic regimen, e.g. renal dialysis, and oncology. Decision support and safety checks must be performed when ordering as well as dispensing medications or immunisations. Medication orders functionality includes drug utilisation review and patient compliance tracking. | Core. |  |
|  |  | The system must provide the ability to manage essential drug list as per the prescribed minimum benefits rules and within RSA industry standard rules. | Core |  |
|  |  | The system must provide the ability to present a list of medications based on an attribute of the medication (e.g. partial medication name, therapeutic class, or formulary). | Core. |  |
|  |  | The system must provide the ability to present a list of medications based on an attribute of the patient (e.g. proposed treatment, patient condition, order set, age, gender). | Core. |  |
|  |  | The system must provide the ability to maintain a distinct list of orderable medications and immunisations (i.e. formulary). | Core. |  |
|  |  | The system must provide the ability to present availability of a medication (e.g. at which pharmacy/dispensary the medication is in stock). | Core. |  |
|  |  | The system must provide the ability to maintain directly or by reference a list (i.e. formulary) of medications and immunisations which includes a unique identifier for each medication/immunisation. | Core. |  |
|  |  | The system must provide the ability for the clinician to edit medication administration instructions and link it to the corresponding instances of that medication order. | Core. |  |
|  |  | The system must provide the ability to extract, update and store a prescription re-order by allowing a prior prescription to be re-ordered without re-entering previous data (e.g. administration schedule, quantity, SIG). | Core. |  |
|  |  | The system must provide the ability to extract, update and store a prescription re-order from a prior prescription using the same dosage but allowing for editing of details adequate for correct filling and administration of medication (e.g. dose, frequency, body weight). | Core. |  |
|  |  | The system must provide the ability to extract, update and store a prescription renewal from a prior prescription using a different dosage but allowing for editing of details adequate for correct filling and administration of medication (e.g. dose, frequency, body weight). | Core. |  |
|  |  | The system must provide the ability to extract and render medications by generic, and/or brand name. | Core. |  |
|  |  | The system must provide the ability to capture medication order details as distinct data for correct filling, dispensing and administration of drug (e.g. dose, route, physical form, duration, SIG). | Core. |  |
|  |  | The system must provide the ability to maintain and render, as distinct data, medication orders including all the details adequate for correct filling, dispensing and administration (e.g. drug, dose, route, SIG). | Core. |  |
|  |  | The system must provide the ability to capture medication order details including dose, route, frequency and comments as free text. | Core. |  |
|  |  | The system must provide the ability to manage free text as part of a medication order or prescription (e.g. "this patient is unable to swallow large pills"). | Core. |  |
|  |  | The system must render fixed text (e.g. "Bio-hazard Warning") as part of a medication order according to organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must determine and render a notification to the provider that information required to compute a dose is missing or invalid. | Core. |  |
|  |  | The system must provide the ability to capture patient's preference for medication usage (e.g. oral vs. injectable, generic vs. brand name) and present it to a provider at the time of medication ordering. | Core. |  |
|  |  | The system must provide the ability to manage prescriptions using fractional units of medications (e.g. 1/2 tsp., 1/2 tablet). | Core. |  |
|  |  | The system must provide the ability to capture and maintain documentation regarding patient weight, including such terms as "unknown", before entering medication orders. | Core. |  |
|  |  | The system must provide the ability to capture the administrative or clinical reasons/indications/rationale for the medication(s) selected during order entry. | Core. |  |
|  |  | The system must provide the ability to determine and render the status of a medication order (e.g. for outpatient medication ordering: captured, verified, filled, or dispensed to patient; for inpatient: captured, verified, filled, or medication administered). | Core. |  |
|  |  | The system must provide the ability to determine and render the status of medication dispensing. | Core. |  |
|  |  | The system must update the appropriate patient medication list with the prescribed medications (in case of multiple medication lists). | Core. |  |
|  |  | The system must provide the ability to enter and maintain prescription information from an external source (e.g. transcribed information from a non-network provider) to fill or renew a prescription. | Core. |  |
|  |  | The system must provide the ability to electronically receive and maintain prescription information from an external source (e.g. electronically from a non-network provider) to fill or renew a prescription. | Core. |  |
|  |  | The system should provide the ability to manage medication orders for un-coded medications. | Non-Core. |  |
|  |  | The system should provide the ability to manage medication orders for non-formulary medications (e.g. medications that are being studied, investigational products being used in research trials, and blind study protocols). | Non-Core. |  |
|  |  | The system should provide the ability to render an alert or notification that a non-formulary medication or immunisation was ordered according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  |  | The system must provide the ability to receive the patient's current medication list from pharmacy/dispensary (directly) or via an intermediary network. | Core. |  |
|  |  | The system must provide the ability to order supplies associated with medication orders according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must render a list of frequently-used patient medication administration instructions. | Core. |  |
|  |  | The system must capture the ordering clinician's selection for cases where the system renders a list of frequently-used patient medication administration instructions. | Core. |  |
|  |  | The system must render a list of medication administration instructions common to multiple orders for the patient. | Core. |  |
|  |  | The system must capture the ordering clinician's selection for cases where the system renders a list of medication administration instructions common to multiple orders for the patient. | Core. |  |
|  |  | The system must provide the ability to render patient instructions that are linked to an ordered medication. | Core. |  |
|  |  | The system should provide the ability to transmit a request for a patient's prescription drug insurance eligibility verification. | Non-Core. |  |
|  |  | The system must provide the ability to manage orders that contain distinct medication components to create combination drugs or compounds (e.g. Butalbital compound and ointment mixtures). | Core. |  |
|  |  | The system must provide the ability to maintain a constraint on the number of times that a prescription is transmitted to an external provider for dispensing according to RSA industry standards. organisational policy, and/or jurisdictional law (e.g. limited print of narcotic prescription to 1 time). | Core. |  |
|  |  | The system must provide the option to render a paper copy of medication and immunisation prescriptions for the patient to take to a pharmacy/dispensary for fulfilment. | Core. |  |
|  |  | The system must provide the ability to render prescriptions for printing/reprinting, according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to render the associated problem, diagnosis or condition (indication) on the printed prescription according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system should provide the ability to render a list of transmission options for a prescription/medication order to a specified pharmacy/dispensary (e.g. printing, e-prescribing, e-mail). | Non-Core. |  |
|  |  | The system must provide the ability to capture, maintain, and present the patient's consent to have restricted medications administered, when medication orders are prepared. | Non-Core. |  |
|  |  | The system should provide the ability to present information received through health plan/payer formulary checking (e.g. formulary alternatives, formulary status, co-pay and coverage types, prior authorisation requirements, step therapy requirements, age limits, gender limits, quantity limits, age, gender, summary resource links and drug-specific resource links). | Non-Core. |  |
|  |  | The system must provide the ability to capture and render an indicator of an explicit route for the administration of specific medications during the ordering process. | Core. |  |
|  |  | The system must render available alternate medication administration routes during the medication ordering process when multiple routes exist and none was specified. | Core. |  |
|  |  | The system must provide the prescriber/provider with the ability to electronically transmit orders, prescriptions, eligibility inquiries, acknowledgements and renewal responses to the pharmacy/dispensary, as necessary, to initiate, change, or renew a medication order. | Core. |  |
|  |  | The system must provide the ability to receive any acknowledgements, prior authorisations, renewals, inquiries and fill notifications provided by the pharmacy/dispensary or other participants in the electronic prescription process. | Core. |  |
|  |  | The system must provide the ability to exchange clinical information with pharmacies using current realm-specific messaging or services standards. | Core. |  |
|  |  | The system must provide the ability to transmit a request to the pharmacy/dispensary (based on an existing order) that additional medication be delivered (i.e. re-supply request). | Core. |  |
|  |  | The system must provide the ability to capture authorisation for transmittal of medication renewal data to an external system and transmittal of a notice to patient via preconfigured notification channel (e.g. Consumer Health Solution or Personal Health Record (PHR)), according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system should present a medication compendia or formulary content (e.g. drug, dose, route and SIG) to facilitate the selection of the medication to be ordered. | Non-Core. |  |
|  |  | The system should render a list of frequently-ordered medications by diagnosis by provider which must include the full details of the medication, including SIG, quantity, refills, dispense as written, etc and capture the provider's selection. | Non-Core. |  |
|  |  | The system should provide the ability to capture and render reminders to patients regarding required follow up tests based on the prescribed medication. | Non-Core. |  |
|  |  | The system should provide the ability to capture and render reminders to the clinicians regarding necessary patient follow up tests, based on the prescribed medication. | Non-Core. |  |
|  |  | The system must update a patient's medication list to show that the medication is discontinued when a prescribed medication or standing medication order is discontinued. | Core. |  |
|  |  | The system must provide signature functionality to the prescribing provider to sign medication order (e-prescription) according to RSA industry standards and legislation. | Core. |  |
|  |  | The system must have access to laboratory data during order entry with additional capacity to re-evaluate lab data. | Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Orders. 🡪 Medication Orders. 🡪 **Drug Utilisation Review.** | The system must provide the ability to manage drug utilisation reviews. Drug utilisation review provides CDS to medication orders to minimise errors (leading to adverse events) when ordering medication/immunisation. It consists of the functions: medication interaction and allergy checking, medication dosing and warnings, formulary compliance, medication alert overrides, medication recommendations and medication reconciliation and microbial sensitivity and antibiotic resistance. Drug utilisation review function can be used by both, prescribers and pharmacists. The latter use them as part of the pharmacy/dispensary function. | Core. |  |
|  |  | The system should have the ability to receive and transmit drug utilisation review findings and formulary and benefits (F&B) data with the pharmacy/dispensary. | Non-Core. |  |
|  |  | The system should provide the ability to capture the duration of a drug interaction warning after the prescription has run-out. | Non-Core. |  |
|  |  | The system should provide the ability to capture and maintain the severity level at which warnings are displayed. | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Orders. 🡪 Medication Orders. 🡪 Drug Utilisation Review. 🡪 **Medication interaction and allergy checking.** | The system must provide the ability to manage medication interaction and allergy checking. Medication interaction and allergy checking must check against the patient’s clinical history (including documented medication allergy reactions, sensitivities, intolerances, and other adverse reactions); it must check for potential medication interactions; and must trigger alerts when necessary. Alerts must be triggered during ordering and must be based on coded, active and non-active medications for any of the aforesaid risks. The system must provide the ability to customise alerts for a group or user. | Core. |  |
|  |  | The system must determine allergic reactions, drug-drug interactions, and other potential adverse reactions, and render alerts or notifications when new medications are ordered. | Core. |  |
|  |  | The system must provide the ability to manage interaction and allergy checking and render alerts and notifications when new medications are ordered. | Core. |  |
|  |  | The system should provide the ability to render an alert, at the time a new medication is prescribed/ordered, that drug interaction, allergy, and formulary checking will not be performed against un-coded or free text medication(s). | Non-Core. |  |
|  |  | The system should provide the ability to render and tag as inactive recently inactivated medications for inclusion in current medication screening according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  |  | The system must determine and present the presence of interactions between medications ordered and medications already on the current medication list of the patient. | Core. |  |
|  |  | The system must determine and present the presence of interactions between medications ordered and true-allergies on the current allergy list of the patient. | Core. |  |
|  |  | The system must determine and present the presence of contraindications between medications ordered and patient's current health condition and characteristics (e.g. gender, age, weight, smoking status, pregnancy status, renal function). | Core. |  |
|  |  | The system must determine and present the presence of interactions between medications ordered and food or beverages. | Core. |  |
|  |  | The system must determine and render the presence of interactions between medications ordered, medications on the current medication list of the patient as well as the patient’s previous medications according to organisation policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must determine and present the presence of interactions between medications ordered and supplements (i.e. dietary) on the current medication list of the patient. | Core. |  |
|  |  | The system must provide the ability to capture, maintain and render a medication order despite alerts for interactions, and/or allergies being present. | Core. |  |
|  |  | The system must provide the ability to determine and present the presence of duplicate therapies. | Core. |  |
|  |  | The system must provide the ability to document why a drug interaction warning was overridden. | Core. |  |
|  |  | The system must determine the presence of drug-laboratory interactions and present information to the clinician that certain laboratory test results may be impacted by a patient's medications. | Core. |  |
|  |  | The system must provide the ability to determine, maintain, and present medications noted to be ineffective for the patient in the past. | Core. |  |
|  |  | The system must provide the ability to present, on demand, potential medication-allergy, medication-medication and medication-condition interactions based on current medications, active allergies and active problems lists of the patient. | Core. |  |
|  |  | The system must present the rationale for a medication interaction alert. | Core. |  |
|  |  | The system should render an alert to the user if the medication interaction information or database has not been updated within a set time parameter. | Non-Core. |  |
|  |  | The system should determine and render notifications regarding drug-drug interaction(s) to the patient's provider or to the patient's care team when relevant clinical information changes (e.g. new clinical data from an internal or external source) have been made according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Orders. 🡪 Medication Orders. 🡪 Drug Utilisation Review. 🡪 **Medication dosing and warnings.** | The system should provide the ability to manage medication dosing and warnings. Medication dosing and warnings must trigger alerts and warnings when ordering and dispensing medication. These must be based on patient-specific parameters and conditions, e.g. age, height, weight, lean body mass, sensitivity, BSA, genetic disposition, contraindications, pregnancy, breast-feeding, occupational risks, and hepatic or renal insufficiency, and patient preferences, e.g. reluctance to use antibiotics. It must also make appropriate dosing recommendations based on known patient conditions and characteristics. It must be applied to both simple and compounded medication. | Non-Core. |  |
|  |  | The system should provide the ability to determine and render weight-specific dose suggestions and auto-populate (e.g. default) medication orders based on the suggested dosage. | Non-Core. |  |
|  |  | The system should provide the ability to capture alternative patient dosing weight(s) (e.g. ideal body weight or dry weight vs. actual patient weight) for the purpose of dose calculation. | Non-Core. |  |
|  |  | The system should provide the ability to determine and render alternative weight-specific dose recommendations and auto-populate medication orders based on the suggested dosage. | Non-Core. |  |
|  |  | The system should provide the ability to render patient-specific medication dosing recommendations based on the patient's age and weight/body surface area. | Non-Core. |  |
|  |  | The system should provide the ability to render patient-specific medication dosing recommendations based on previous patient experience (e.g. adverse reaction, type, and severity) with the same medication. | Non-Core. |  |
|  |  | The system must flag lab information during order entry and processing to give a view of sensitivity and antibiotics resistance considerations. | Core. |  |
|  |  | The system should provide the ability to determine weight-based medication dosing when doses are based on the patient's weight (e.g. mg/kg). | Non-Core. |  |
|  |  | The system should provide the ability to determine and render medication orders in which the weight-specific dose suggested employs a starting range with incremental changes toward a target range (e.g. a target therapeutic index). | Non-Core. |  |
|  |  | The system should render a notification requesting the parameters (e.g. coefficients, exponents, formulas) required to calculate the body surface area. | Non-Core. |  |
|  |  | The system should provide the ability to determine and present dose ranges based on patient age. | Non-Core. |  |
|  |  | The system should provide the ability to manage complex medication orders that include dosing based on either physical status or laboratory values. | Non-Core. |  |
|  |  | The system should provide the ability to determine and present drug dosing based on custom compounded medication components. | Non-Core. |  |
|  |  | The system should provide the ability to manage medication orders with patient-specific dose calculations (e.g. by weight, body surface area or genotype). | Non-Core. |  |
|  |  | The system should provide the ability to determine potential adverse reactions and render alerts or notifications when new medications are ordered. | Non-Core. |  |
|  |  | The system should determine and render contraindications to the ordered dosage range. | Non-Core. |  |
|  |  | The system should determine and render an appropriate medication dosage range, specific for each known patient condition (e.g. diagnosis, pregnancy) and parameter (e.g. height, weight, pulse). | Non-Core. |  |
|  |  | The system should provide the ability to transmit from the prescriber, documented reasons for overriding a medication alert, to the pharmacy/dispensary. | Non-Core. |  |
|  |  | The system should present the maximum dose per day in dosing decision support for cases where the maximum daily doses are known. | Non-Core. |  |
|  |  | The system should provide the ability to determine and render medication dose by patient body weight. | Non-Core. |  |
|  |  | The system should provide the ability to determine and render medication dose by body surface area. | Non-Core. |  |
|  |  | The system should provide the ability to determine and render medication dose recommendations based on patient parameters, including age and diagnostic test results. | Non-Core. |  |
|  |  | The system should determine when no recommended medication dosing is available that is specific to known patient conditions and parameters, such as age or weight, and render notifications to the provider. | Non-Core. |  |
|  |  | The system should determine whether no recommended paediatric medication dosing is available and render notifications to the provider according to RSA industry standards and scope of practice. | Non-Core. |  |
|  |  | The system should determine and render medication dosages using all components of a combination medication (e.g. acetaminophen-hydrocodone). | Non-Core. |  |
|  |  | The system should provide the ability to capture the factors used to calculate the future dose for a given prescription. | Non-Core. |  |
|  |  | The system should determine whether data required to compute a dose are missing or invalid and render notifications to the provider. | Non-Core. |  |
|  |  | The system should maintain the formula used for the calculation for cases where the system determines a value that affects medication dosing recommendations (e.g. creatinine clearance). | Non-Core. |  |
|  |  | The system should support electronic communication with the pharmacy/dispensary system and must provide the ability to transmit the documented reasons for overriding a medication alert to the pharmacy/dispensary. | Non-Core. |  |
|  |  | The system should provide the ability to determine and maintain the cumulative drug dose. | Non-Core. |  |
|  |  | The system should determine and render a notification if the cumulative medication dose exceeds the recommended dose. | Non-Core. |  |
|  |  | The system should provide the ability to maintain and uniquely render medications with look-alike names with recommended conventions (e.g. from FDA or Institute for Safe Medication Practices), such as, "Tall Man lettering". | Non-Core. |  |
|  |  | The system should provide the ability to determine the presence of medication interactions when multiple medications of the same therapeutic or pharmacologic class are ordered and present notifications when such medications are selected during prescribing/ordering. | Non-Core. |  |
|  |  | The system should provide the ability to determine and render recommended medication for substitution based on availability, cost, generic equivalent, and according to organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  |  | The system should provide the ability to capture, store and render information concerning medication orders including any alerts following screening of medication orders and the clinician responses (place, modify or cancel order). | Non-Core. |  |
|  |  | The system should provide the ability to capture and render medication warnings and recommendations from official governmental agencies. | Non-Core. |  |
|  |  | The system should provide the ability to extract reference information for prescribing/warning. | Non-Core. |  |
|  |  | The system should provide the ability to store configuration parameters (e.g. coefficients, exponents, formulas) regarding the patient's body surface area. | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Orders. 🡪 Medication Orders. 🡪 Drug Utilisation Review. 🡪 **Formulary Compliance.** | The system should provide the ability to manage formulary compliance. | Non-Core. |  |
|  |  | The system should notify the ordering provider when a medication order is not formulary-compliant. | Non-Core. |  |
|  |  | The system should notify the ordering provider regarding the formulary compliance in time for him/her to decide whether to continue with the order. | Non-Core. |  |
|  |  | The system should present formulary-compliant alternatives to the ordering provider. | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Orders. 🡪 Medication Orders. 🡪 Drug Utilisation Review. 🡪 **Medication Alert Overrides.** | The system must provide the ability to manage medication alert overrides. Medication alert overrides are overrides of medication alerts and warnings that are generated, for example, for possible contraindications to administration of medications (e.g. the administration of tetracycline to pregnant women). The provider may override an alert, in which case the override must be recorded with reasons. | Core. |  |
|  |  | The system must provide the ability to edit a medication order by overriding the drug alert or warning and transmitting the updated medication order. | Core. |  |
|  |  | The system must provide the ability to capture reasons for overriding a drug alert or warning at the time of ordering. | Core. |  |
|  |  | The system must provide the ability to tag and render an indication that a provider has overridden a drug alert or warning. | Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Orders. 🡪 Medication Orders. 🡪 Drug Utilisation Review. 🡪 **Medication Recommendations.** | The system should provide the ability to render medication recommendations. The system must provide medication treatment options based on guidelines/protocols (practice standards) and patient conditions, diagnoses and characteristics (e.g. obesity, occupation). The system must also provide prompts and notifications to support medication monitoring. | Non-Core. |  |
|  |  | The system should determine and present recommendations for medication regimens based on findings related to the patient diagnosis. | Non-Core. |  |
|  |  | The system should determine and present recommendations for alternative medication treatments on the basis of practice standards, patient conditions and characteristics. | Non-Core. |  |
|  |  | The system should determine and render recommendations for monitoring (e.g. labs, behaviours, adverse reactions, side effects) as appropriate to a particular medication. | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Orders. 🡪 Medication Orders. 🡪 Drug Utilisation Review. 🡪 **Medication Reconciliation.** | The system should provide the ability to manage medication reconciliation. The system must review a patient’s medication information from all sources and must reconcile conflicts. Current medication information must be compared to medications to be prescribed or recommended for the patient in order to avoid medication errors such as omissions, duplications, dosing errors, or drug interactions. This must be done at every transition of care that might require new medication, and its outcome (a decision usually shared between providers involved) must be recorded and communicated to the patient and role-players involved. If, for example, a patient’s pain, anticoagulation, hyper-glycemia or other high-risk therapy is managed by a specialist, the healthcare team must be aware to avoid prescribing an additional equivalent of this medication. | Non-Core. |  |
|  |  | The system should provide the ability to manage the process of medication reconciliation according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  |  | The system should provide the ability to update a medication order directly from medication reconciliation. | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Orders. 🡪 Medication Orders. 🡪 **Patient Compliance Tracking.** | The system should provide the ability to manage patient compliance tracking. The system should monitor and record patient compliance with medication by keeping a record of patients with a prescription (including once-off, repeat and to-follow prescriptions) and generate a real-time report of those who did not comply with the collection of prescribed medication. | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Orders. 🡪 **Non-Medication Orders.** | The system must provide the ability to manage (ordering and processing) non-medication orders. | Core. |  |
|  |  | The system must provide the ability to manage the following types of non-medication orders:   1. Patient transfer between units/facilities/locations. | Core. |  |
|  |  | 1. Ambulating a patient. | Core. |  |
|  |  | 1. Medical supplies. | Core. |  |
|  |  | 1. Wound care. | Core. |  |
|  |  | 1. Durable medical equipment. | Core. |  |
|  |  | 1. Home intravenous (IV) therapy. | Core. |  |
|  |  | 1. Therapy. | Core. |  |
|  |  | 1. Dental laboratory service requests. | Core. |  |
|  |  | 1. Orthopaedic laboratory service requests. | Core. |  |
|  |  | 1. Psychotherapy and other mental health counselling. | Core. |  |
|  |  | 1. Behavioural counselling. | Core. |  |
|  |  | 1. Surgical procedures. | Core. |  |
|  |  | 1. Non-surgical procedures. | Core. |  |
|  |  | 1. Laboratory order. | Core. |  |
|  |  | 1. Radiology order. | Core. |  |
|  |  | 1. Biologics order. | Core. |  |
|  |  | The system must provide the ability to manage non-medication patient care orders for an action or item. | Core. |  |
|  |  | The system must provide the ability to capture and render order detail for correct order fulfilment. | Core. |  |
|  |  | The system must provide the ability for dental and orthopaedic practitioners to capture clinical instructions per dental/orthopaedic laboratory order. | Core. |  |
|  |  | The system must provide the ability to manage the status (e.g. active, discontinued, requisitioned, completed) of the ordered action or item. | Core. |  |
|  |  | The system must provide the ability to capture a future date for an ordered action or item. | Core. |  |
|  |  | The system must provide the ability to capture and render a set of patient instructions that will be provided to the patient for correct order fulfilment. | Core. |  |
|  |  | The system must provide the ability to transmit the order for fulfilment. | Core. |  |
|  |  | The system should provide the ability to link non-medication orders to a medication order (e.g. ordering an intravenous pump in coordination with intravenous medication). | Non-Core. |  |
|  |  | The system must provide the ability to store a task to be recurrent at a defined interval for a specified length of time. | Core. |  |
|  |  | The system should determine and render, at the time of order entry, required order entry components for non-medication orders. | Non-Core. |  |
|  |  | The system must render an alert at the time of order entry if a non-medication order is missing required information. | Core. |  |
|  |  | The system must render an alert for orders that may be inappropriate or contraindicated for specific patients at the time of order entry. | Core. |  |
|  |  | The system must provide the ability to capture, maintain and render elapsed time parameters for purposes of duplicate order checking. | Core. |  |
|  |  | The system should provide the ability to link a non-medication order with related clinical problem(s), and/or diagnosis code(s). | Non-Core. |  |
|  |  | The system must capture and maintain information required for paediatric ordering (e.g. age and weight of the child for radiology or laboratory orders) according to RSA industry standards, scope of practice. | Core. |  |
|  |  | The system should auto-populate the answers to questions required for diagnostic test ordering from data within the medical record or captured during an encounter. | Non-Core. |  |
|  |  | The system should provide the ability to tag certain diagnostic studies that may/should not be repeated within a prescribed period of time and present an indicator at time of ordering. | Non-Core. |  |
|  |  | The system should provide the ability to manage the process of order reconciliation according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Orders. 🡪 Non-medication Orders. 🡪 **Radiology Orders.** | The system must provide the ability to enable the origination, documentation, transmission, tracking and maintenance of orders for diagnostic tests. In addition to the requirements listed under non-medication orders above, radiology orders specific requirements are listed below. | Core. |  |
|  |  | The system must provide the ability to manage radiology orders for diagnostic tests. | Core. |  |
|  |  | The system must provide the ability to capture and render standard radiology order detail for diagnostic test order fulfilment. | Core. |  |
|  |  | The system must provide the ability to capture and maintain user-created instructions, and/or prompts when ordering radiology diagnostic tests or procedures. | Core. |  |
|  |  | The system must provide the ability to manage the status (e.g. requisitioned, completed, in process) of radiology diagnostic test(s). | Core. |  |
|  |  | The system must provide the ability to capture and render patient instructions relevant to the radiology diagnostic test ordered. | Core. |  |
|  |  | The system must provide the ability to transmit radiology orders to the recipient (s) for order fulfilment of the radiology diagnostic test. | Core. |  |
|  |  | The system must provide the ability to transmit supporting detailed documentation to the recipient (s) for order fulfilment of the radiology diagnostic test. | Core. |  |
|  |  | The system must provide the ability to transmit radiology order activity to public health authorities according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to render prior diagnostic results for a given patient for cases where subsequent orders are being captured. | Core. |  |
|  |  | The system must provide the ability to capture and render complete patient demographic information for radiology diagnostic orders according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to include an indication (e.g. clinical rationale, reason, link to Problem list) for ordering the radiology test(s). | Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Orders. 🡪 Non-medication Orders. 🡪 **Laboratory Orders.** | The system must provide the ability to enable the origination, documentation, transmission, tracking and maintenance of laboratory orders for diagnostic tests. In addition to the requirements listed under non-medication orders further above, laboratory orders specific requirements are listed below. | Core. |  |
|  |  | The system must provide the ability to manage laboratory orders for diagnostic tests, orthopaedic laboratory work and DNA typing/matching as a requirement for deployment. | Core. |  |
|  |  | The system must provide the ability to capture and render standard laboratory order detail for diagnostic test order and dental and orthopaedic laboratory order fulfilment. | Core. |  |
|  |  | The system must provide the ability to capture and maintain user-created instructions, and/or prompts when ordering laboratory diagnostic tests or procedures and dental and orthopaedic laboratory orders. | Core. |  |
|  |  | The system must provide the ability to manage the status (e.g. requisitioned, completed, in process) of laboratory diagnostic test(s), and dental and orthopaedic laboratory orders. | Core. |  |
|  |  | The system must provide the ability to capture and render patient instructions relevant to the laboratory diagnostic test, dental lab work and orthopaedic lab work ordered. | Core. |  |
|  |  | The system must provide the ability to transmit laboratory orders to the recipient (s) for order fulfilment of the laboratory diagnostic test, dental lab or orthopaedic lab work order. | Core. |  |
|  |  | The system must provide the ability to transmit supporting detailed documentation to the recipient (s) for order fulfilment of the laboratory diagnostic test, dental lab work and orthopaedic lab work. | Core. |  |
|  |  | The system must provide the ability to transmit laboratory order activity to public health authorities according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to render prior diagnostic results for a given patient, in cases where subsequent orders are being captured. | Core. |  |
|  |  | The system must provide the ability to capture and render complete patient demographic information for laboratory diagnostic orders, dental lab work orders and orthopaedic lab work orders according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to include an indication (e.g. clinical rationale, reason, link to Problem list) for ordering the laboratory test(s). | Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Orders. 🡪 Non-medication Orders. 🡪 **Biologics Orders.** | Biologics orders are for blood products and other biologics used in care provisioning. This function must interact with relevant sources or registries (e.g. a blood bank system). In addition to the requirements listed under non-medication orders above, biologic orders specific requirements are listed below. | Core. |  |
|  |  | The system must provide the ability to manage orders for blood products and biological products. | Core. |  |
|  |  | The system must provide the ability to manage the status (e.g. requisitioned, completed, in process) of blood product, and/or biological product orders. | Core. |  |
|  |  | The system must provide the ability to manage storage request orders for blood products, and/or biological products. | Core. |  |
|  |  | The system must provide the ability to manage the status of storage request orders (e.g. requisitioned, completed, in process) for blood products, and/or biological products. | Core. |  |
|  |  | The system must provide the ability to exchange blood product, and/or biological product information between members of the care team. | Core. |  |
|  |  | The system must provide the ability to manage the use of blood products and other biologics in the provision of care. | Core. |  |
|  |  | The system should provide the ability to manage information associated with the collection and administration of non-blood biologics (e.g. breast milk products), including donor and recipient, and/or patient-identifying data, aliquot-identifying data, amount, route (e.g. oral versus tube), expiration date and time of administration. | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Orders. 🡪 Non-medication Orders. 🡪 **Theatre Orders.** | The system must provide the ability to manage theatre orders. Refer to resource scheduling function. | Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Orders. 🡪 Non-medication Orders. 🡪 **Referrals.** | The system must provide the ability to manage referrals. Referrals, or referral orders, are placed between providers (both internal and external to the organisation) and can be received electronically or recorded from paper. A referral includes, when required, consent and authorisation for disclosure. It may involve, via workflow, completing a referral appointment.  CDS must be provided for referrals in the following ways:   1. Guidelines regarding a referral’s appropriateness in a clinical context. 2. Evaluates patient information for referral indications and, if necessary, prompts the provider with referral recommendations, which can also be based on other orders (e.g. an order for Adriamycin, which requires prior heart-related testing, could result in a recommended referral to radiology, and/or cardiology). 3. During order creation, compiles a referral package that includes relevant clinical, demographic and insurance information (if available).   If necessary, a referral [request] can be triaged prior to a response to the requestor, which typically applies when a required resource is not readily available to enable fulfilment of the order. In addition to the requirements listed under non-medication orders further above, referral specific requirements are listed below. | Core. |  |
|  |  | The system must provide the ability to manage outbound referral(s), whether internal or external to the organisation. | Core. |  |
|  |  | The system must provide the ability to capture clinical details necessary for the referral according to RSA industry standards, scope of practice of the referral recipient. | Core. |  |
|  |  | The system must provide the ability to link (e.g. link to image stored in Picture Archiving and Communication Systems (PACS)) clinical details as necessary for the referral according to RSA industry standards and scope of practice of the referral recipient. | Core. |  |
|  |  | The system must provide the ability to render clinical details as appropriate for the referral according to RSA industry standards, scope of practice of the referral recipient (e.g. clinical details required for dermatologist differ from those required by oncologist). | Core. |  |
|  |  | The system must provide the ability to capture, link, store, and render administrative details (e.g. insurance information, consents and authorisations for disclosure) as necessary for the referral. | Core. |  |
|  |  | The system must provide the ability to capture, store, and render an inbound referral response (e.g. referral accepted, referral denied, or more information needed). | Core. |  |
|  |  | The system must provide the ability to determine and render recommended actions based on an inbound referral response (e.g. referral accepted, referral denied, or more information needed). | Core. |  |
|  |  | The system should provide the ability to receive a referral(s) from external care provider(s). | Non-Core. |  |
|  |  | The system should provide the ability to capture and render the source of external referrals received and the reason for the referral. | Non-Core. |  |
|  |  | The system should provide the ability to capture referral documents received with external referrals and associate these documents with the received referral. | Non-Core. |  |
|  |  | The system should provide the ability to capture referral data of referrals received from external providers, and to associate the data with the received referral. | Non-Core. |  |
|  |  | The system should provide the ability to capture clinical images received with referrals from external providers and to associate these clinical images with the received referral. | Non-Core. |  |
|  |  | The system must provide the ability to analyse and present recommendations for potential matches between the patient identified in an externally received referral and existing patients in the system. | Core. |  |
|  |  | The system must provide the ability to capture e-referrals and to receive an external e-referral for a patient that did not previously exist in the system. | Core. |  |
|  |  | The system should provide the ability to capture administrative details from a referral that was received from an external provider (e.g. insurance information, or a consent and authorisation for disclosure). | Non-Core. |  |
|  |  | The system should provide the ability to capture clinical details from a referral that was received from an external provider. | Non-Core. |  |
|  |  | The system should provide the ability to present received e-referrals from external providers to a user (internal provider) for triage and approval. | Non-Core. |  |
|  |  | The system should provide the ability for a user to create a patient record from information received in the referral. | Non-Core. |  |
|  |  | The system must provide the ability for a user to reject an e-referral request. | Core. |  |
|  |  | The system must provide the ability to capture the reason for an e-referral acceptance or rejection. | Core. |  |
|  |  | The system must provide the ability to transmit to the referring provider the acceptance or rejection of the e-referral request including the reasons provided for acceptance/rejection. | Core. |  |
|  |  | The system must provide the ability to transmit to the referring provider a request for additional information prior to accept/rejection of e-referral request. | Core. |  |
|  |  | The system should provide the ability to capture the documentation of a transfer in cases where a referral received from an external provider includes a transfer of care (complete or partial or temporary) according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  |  | The system must provide the ability to electronically receive and render location data for incoming referred patients who are en-route to the care setting (e.g. EMS system tracking patient arrival to the Emergency Department). | Core. |  |
|  |  | The system should provide the ability to allocate resources for incoming referred patients. | Non-Core. |  |
|  |  | The system should provide the ability to transmit to the referring provider a notification that the patient has attended an appointment with the referred to provider. | Non-Core. |  |
|  |  | The system should provide the ability to capture a notification that the patient fulfilled a referred appointment. | Non-Core. |  |
|  |  | The system must provide the ability to determine and render diagnosis-based clinical guidelines for making a referral. | Core. |  |
|  |  | The system must provide the ability to determine the contents of a referral order by rendering order sets for review by the provider. | Core. |  |
|  |  | The system must provide the ability to capture and render clinical and administrative data (e.g. insurance information) as part of the referral process. | Core. |  |
|  |  | The system must provide the ability to capture and render test and procedure results with a referral. | Core. |  |
|  |  | The system should provide the ability to capture and render standardised or evidence-based protocols with the referral. | Non-Core. |  |
|  |  | The system must provide the ability to render clinical and administrative data, as well as test and procedure results to the referred-to provider. | Core. |  |
|  |  | The system must provide the ability to capture and render referral orders with detail adequate for correct routing to the referred-to provider. | Core. |  |
|  |  | The system must provide the ability to transmit clinical and administrative data, as well as test and procedure results to the referred-to provider. | Core. |  |
|  |  | The system must provide the ability to capture and render age-appropriate data as part of the referral process according to RSA industry standards, scope of practice. (e.g. inclusion of growth chart in paediatric referral). | Core. |  |
|  |  | The system must provide the ability to capture a provider's schedule for receiving referrals. | Core. |  |
|  |  | The system must determine and render available provider appointments based on their schedules at the time of referral order entry. | Core. |  |
|  |  | The system must provide the ability to transmit a referral to multiple providers. | Core. |  |
|  |  | The system must determine and present recommendations for potential referrals based on patient factors or guidelines including clinical guidelines, jurisdictionally-based guidelines, patient diagnosis(es), and/or patient condition (e.g. for smoking cessation counselling if the patient smokes cigarettes or other tobacco products or was prescribed a medication to support smoking cessation). | Core. |  |
|  |  | The system must provide the ability to export or transmit electronic referral(s) (e-referral), including all supporting clinical and administrative information to other care provider(s), whether internal or external to the organisation. | Core. |  |
|  |  | The system must provide the ability to capture and maintain a minimum set of required information that must be included in an e-referral to be transmitted. | Core. |  |
|  |  | The system must determine if the minimum set of information is satisfied prior to transmitting an e-referral. | Core. |  |
|  |  | The system must render prompts to capture missing information prior to transmitting an e-referral. | Core. |  |
|  |  | The system must provide the ability to capture clinical information (e.g. medications, diagnostic results) for inclusion in an e-referral. | Core. |  |
|  |  | The system must provide the ability to present e-referrals, including all attached information, and capture an electronic signature prior to transmission. | Core. |  |
|  |  | The system must provide the ability to capture diagnosis-based requirements for sending an e-referral based on the referred-to provider's requirements (e.g. a breast cancer specialist would not want to receive a colon cancer patient referral). | Core. |  |
|  |  | The system must provide the ability to present diagnosis-based requirements at the time of referral order entry for cases where the system provides the ability to capture diagnosis-based requirements for sending an e-referral, based on the referred-to provider’s requirements. | Core. |  |
|  |  | The system must provide the ability to define clinical requirements (e.g. history, physical exam, laboratory or Radiology results) for sending an e-referral based on the referred-to provider's requirements (e.g. a breast cancer specialist may require a positive mammogram before accepting the referral). | Core. |  |
|  |  | The system must provide the ability to capture clinical requirements for sending an e-referral based on the referred-to provider's requirements at the time of referral order entry. | Core. |  |
|  |  | The system must capture and render an electronic acceptance or rejection of an e-referral request. | Core. |  |
|  |  | The system must capture and render the reason for an e-referral acceptance or rejection. | Core. |  |
|  |  | The system must capture a standards-based coded reason for an e-referral acceptance or rejection according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law | Core. |  |
|  |  | The system must capture and render an electronic request for additional information from the referred-to provider. | Core. |  |
|  |  | The system must provide the ability to amend an e-referral order with additional information. | Core. |  |
|  |  | The system must provide the ability to re-export or re-transmit an e-referral, including all supporting clinical and administrative information to another care provider(s), whether internal or external to the organisation. | Core. |  |
|  |  | The system should provide the ability to display the results of e-referral eligibility and health plan/payer checking prior to approval of an e-referral order. | Non-Core. |  |
|  |  | The system must provide the ability to capture referrals relevant to the service provided including the source, date and service(s) referred. | Core. |  |
|  |  | The system must provide the ability to exchange computer readable data on service referral information according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to export electronic referral(s), including relevant supporting clinical information from care providers internal or external to the organisation. | Core. |  |
|  |  | The system must provide the ability to export electronic referral(s), including relevant supporting administrative information from care providers internal or external to the organisation. | Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Orders. 🡪 Non-medication Orders. 🡪 **Admission Orders.** | The system must provide the ability to enable the origination, documentation, transmission, tracking and maintenance of admission orders. Admission orders are submitted by providers when they require patients to be admitted to hospital. An admission order typically includes the relevant diagnosis, required treatment/procedure, diet, and pre-admission requirements (e.g. assessments, home preparation, medication, etc). | Core. |  |
|  |  | The system must provide the ability to manage admission orders. | Core. |  |
|  |  | The system must provide the ability to amend an admission order with additional information. | Core. |  |
|  |  | The system must provide the ability to capture and render standard order detail for admission order fulfilment. | Core. |  |
|  |  | The system must provide the ability to capture and render patient instructions relevant to the admission order. | Core. |  |
|  |  | The system must provide the ability to transmit orders to the recipient(s) for fulfilment of the admission order. | Core. |  |
|  |  | The system must provide the ability to transmit supporting detailed documentation to the recipient(s) for fulfilment of the admission order. | Core. |  |
|  |  | The system must provide the ability to include and manage multiple diagnosis, procedures and tests. | Core |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Orders. 🡪 Non-medication Orders. 🡪 **Meal Orders.** | The system must provide the ability to manage meal orders. Meal orders are submitted by inpatients and/or lodgers (or on their behalf). Patients select meal items from a personalised menu within the boundaries of their prescribed diet, and within the parameters of their procedure schedule. Lodgers to select meal items from a general menu. | Non-Core. |  |
|  |  | The system should provide the ability to develop and present a personalised menu to a patient based on the patient’s prescribed diet and within the parameters of the patient’s procedure schedule. | Non-Core. |  |
|  |  | The system should provide the functionality to patients to select and order items from their personalised patient menu. | Non-Core. |  |
|  |  | The system should provide the ability to transmit orders to the recipient(s) for fulfilment of the meal order. | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Orders. 🡪 Non-medication Orders. 🡪 **Diet Orders.** | The system must provide the ability to manage diet orders. Diet orders are prepared and submitted by a provider (e.g. dietitian). The provider considers the patient’s diagnosis, treatment, procedures and investigations, allergies, medication regimes, progressive health condition and ability to chew, swallow and eat when preparing the diet order. | Core. |  |
|  |  | The system must provide the ability to prepare a diet order per patient. | Core. |  |
|  |  | The system must provide the ability to prompt the user that prepares and submits the diet order if the diet includes nutrients/food/drinks or time schedule that clashes with the patient’s condition (including patient’s diagnosis, treatment, procedures and investigations, allergies, medication regimes, progressive health condition and ability to chew, swallow and eat) and procedures to be performed on the patient. | Core. |  |
|  |  | The system must provide the ability to override prompts and must keep record of overridden prompts as well as the reason for overriding. | Core. |  |
|  |  | The system must provide the ability to transmit orders to the recipient(s) for fulfilment of the diet order. | Core. |  |
|  |  | The system must provide the ability to amend a diet order with additional information. | Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Orders. 🡪 Non-medication Orders. 🡪 **Consumables, medical supplies and assistive devices (non-pharmacy).** | The system must provide the ability to order consumables, medical supplies and assistive devices for patients. The item must be recorded on the patient’s medical device list. | Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Orders. 🡪 Non-medication Orders. 🡪 **Miscellaneous Orders.** | The system should provide the ability to manage miscellaneous orders. Miscellaneous orders include orders that do not fall into any of the above categories e.g. ordering baby formula or meal replacements from the pharmacy//dispensary. They are often specified in free text. | Non-Core. |  |
|  |  | The system should provide the ability to transmit orders to the recipient(s) for fulfilment of miscellaneous orders. | Non-Core. |  |
|  |  | The system should provide the ability to amend miscellaneous orders with additional information | Non-Core. |  |
|  |  | The system should provide the ability to manage free text entries as part of a miscellaneous order. | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Orders. 🡪 **Order Tracking.** | The system must provide the ability to track and route orders. | Core. |  |
|  |  | The system must provide the ability to route and track all orders as they change in status (e.g. through ‘created’, ‘submitted’, ‘received’, ‘confirmed’, ‘in progress’, ‘cancelled’, ‘completed’, ’results available’, etc). It must execute automatically, in real-time, and in the “background”. | Core. |  |
|  |  | The system must support the recording and temporal progress of orders and requests such as prescriptions, treatment orders, investigation requests, and referrals. | Core. |  |
|  |  | The system must provide the ability to the order requester to activate order tracking messages, when submitting an order. | Core. |  |
|  |  | The system must enable order tracking messages to notify the requester of order status changes. Notification may be via SMS, instant messaging (IM) or e-mail. | Core. |  |
|  |  | The system must provide the ability to track an individual order and groups of orders, onscreen, which provides order details and enables enquiries from multiples perspectives. | Core. |  |
|  |  | The system must provide the ability to the executor of an order or a supervisor (e.g. pharmacy/dispensary, radiology, laboratory, individual provider, etc) to activate order tracking messages, when receiving an order or at any stage after receiving an order. | Core. |  |
|  |  | The system must enable order tracking messages to notify the executor/supervisor of order status changes. Notification may be via SMS, IM or e-mail. | Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 **Results.** | The system must provide the ability to manage order results. Where possible, CDS must be provided for results as follows:   1. Results evaluation (and suggested interpretations) in the context of the patient’s healthcare data. 2. Notifications for abnormal results. 3. Trending of results (such as distinct laboratory values over time). 4. Evaluation of pertinent results during order entry (such as evaluation of lab results when ordering a radiology exam). 5. Evaluation of incoming results against active medication orders. | Core. |  |
|  |  | The system must provide the ability to manage test results according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to render numerical and non-numerical current and historical test results. | Core. |  |
|  |  | The system must provide the ability to render results for an identified patient or group of patients. | Core. |  |
|  |  | The system must provide the ability to render results by factors that support results management including type of test, critical indicator and abnormal indicator. | Core. |  |
|  |  | The system must provide the ability to tag and render normal and abnormal indicators for results based on data provided from the original data source. | Core. |  |
|  |  | The system must provide the ability to render numerical results in flow sheets, graphical form or other views that allow comparison of results, and display values graphed over time. | Core. |  |
|  |  | The system must provide the ability to render results by date/time range including ordered date/time, specimen collection date/time and results received date/time. | Core. |  |
|  |  | The system must provide the ability to tag new results received and render to the relevant providers (ordering, copy to) that new results have been received but not reviewed. | Core. |  |
|  |  | The system must provide the ability to capture an indicator that a result has been rendered and acknowledged by a user. | Core. |  |
|  |  | The system must provide the ability to transmit results to other care providers. | Core. |  |
|  |  | The system must provide the ability to transmit results to patients by methods such as phone, electronically or printed letter. | Core. |  |
|  |  | The system must provide the ability to receive a request for action regarding a test result from another provider and to transmit an acknowledgement to that provider of the receipt of that provider's request for action. | Core. |  |
|  |  | The system must provide the ability to transmit an acknowledgement of receipt in cases where a request for action regarding a result from another provider has been received. | Core. |  |
|  |  | The system must provide the ability to render results in clinically logical sections (e.g. Pathology, Chemistry, Cytology), in chronological order within the section. | Core. |  |
|  |  | The system must link results to the electronic order if the system contains the electronic order. | Core. |  |
|  |  | The system must provide the ability to annotate a result. | Core. |  |
|  |  | The system must provide the ability to link and render the results report to other data (e.g. images) with which it is associated. | Core. |  |
|  |  | The system must provide the ability to import and receive preliminary and final result reports from ancillary systems according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to import or receive preliminary and final results as distinct data from ancillary systems, when distinct data is sent from the ancillary system, according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to capture, maintain and render preliminary (e.g. "wet read") and final result reports according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to tag and render a notification to the appropriate health care team member(s) (using role-based or rule-based alerts) of clinically-significant results or result changes. | Core. |  |
|  |  | The system must provide the ability to link results to a specific medical condition, medication or therapeutic class of medication. | Core. |  |
|  |  | The system must provide the ability to render non-diagnostic quality images. | Core. |  |
|  |  | The system should provide the ability to link with Radiology Information Systems (RIS) and PACS to enable the presentation of diagnostic quality images. | Non-Core. |  |
|  |  | The system must provide the ability to link one or more images to a result report. | Core. |  |
|  |  | The system must provide the ability to annotate a result and must render the annotation with subsequent views of that result. | Core. |  |
|  |  | The system should provide the ability to capture an annotation from the patient on a result and render the annotation with subsequent views of that result. | Non-Core. |  |
|  |  | The system should determine that results were received for a patient who is no longer under the care of the ordering provider and tag and render a notification according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  |  | The system should provide the ability to manage results of specific genetic tests, genetic markers, or findings according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law and subject to patient's preferences and consent. | Non-Core. |  |
|  |  | The system must render alerts for a result that is outside of a normal value range. | Core. |  |
|  |  | The system must provide the ability to render trend results. | Core. |  |
|  |  | The system should provide the ability to render pertinent results for analysis at the time of order entry (e.g. evaluation of laboratory results at the time of ordering a radiology exam). | Non-Core. |  |
|  |  | The system must provide the ability to capture and render the abnormal result value that triggered the display of alerts and flags (e.g. a value to trigger a high-high (HH) or low-low (LL) flag). | Core. |  |
|  |  | The system must present alerts for a result that is outside of age specific normal value ranges. | Core. |  |
|  |  | The system must tag critical value results that have not been acknowledged. | Core. |  |
|  |  | The system must provide the ability to render notifications to the providers who participate in the care team when monitored events/parameters indicate irregularities. | Core. |  |
|  |  | The system must provide the ability to render notifications to the patient when monitored events/parameters indicate irregularities. | Core. |  |
|  |  | The system must provide the ability to determine and render decision support algorithms based upon results. | Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Results. 🡪 **Test Results: Laboratory.** | The system must provide the ability to enable the receipt and display of results for laboratory diagnostics tests. | Core. |  |
|  |  | The system must link the laboratory diagnostic test results to the original order in the system. | Core. |  |
|  |  | The system must provide the ability to capture, maintain, store and render laboratory diagnostic results, including preliminary as well as final results. | Core. |  |
|  |  | The system must provide the ability to capture, maintain and render microorganism information/descriptions from laboratory results as free-text. | Core. |  |
|  |  | The system must provide the ability to capture, maintain and render microbiology laboratory results (with sensitivity testing) using standard coding methodology according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to capture, maintain and render laboratory results that identify new and emerging laboratory procedures (e.g. processes that examine emerging organisms, new processes that examine existing organisms). | Core. |  |
|  |  | The system must provide the ability to capture, maintain and render distinct diagnostic results received through an electronic interface. | Core. |  |
|  |  | The system must provide the ability to render indicators of normal and abnormal diagnostic results based on information provided from the original source (e.g. from a laboratory department). | Core. |  |
|  | Patient Care. 🡪 Patient Care Provision. 🡪 Results. 🡪 **Test Results: Radiology.** | The system must provide the ability to enable the receipt and display of radiology diagnostics tests. | Core. |  |
|  |  | The system must link the diagnostic radiology test results to the original order in the system. | Core. |  |
|  |  | The system must provide the ability to capture, store, maintain and render radiology diagnostic results, including preliminary as well as final results. | Core. |  |
|  |  | The system must provide the ability to capture, maintain and render distinct diagnostic radiology results received through an electronic interface. | Core. |  |
|  |  | The system must provide the ability to render indicators of normal and abnormal diagnostic results based on information provided from the original source (e.g. from a radiology department). | Core. |  |
|  | Patient Care. 🡪 **Patient Care Admin.** | Patient care admin must address all administrative aspects of patient care. | Core. |  |
|  | Patient Care. 🡪 Patient Care Admin. 🡪 **Patient Admin Record.** | The system must provide the ability to manage a patient admin record. The system must maintain a single logical record for each uniquely identified patient. The patient’s health information must be linked to this record, which carries static information as well as information that will change over time. The system must separate information that was captured for the wrong patient and combine that information with that of the correct patient. | Core. |  |
|  |  | The system must manage a single logical record for each patient. | Core. |  |
|  |  | The system must provide the ability to determine the unique identity of a patient and link the record to a single patient. | Core. |  |
|  |  | The system must provide the ability to manage a record for a patient when the identity of the patient is unknown. | Core. |  |
|  |  | The system should provide the ability to tag a record when the identity of the patient is unknown according to RSA industry standards, scope of practice, organizational policy, and/or jurisdictional law. | Non-Core. |  |
|  |  | The system must provide the ability to manage more than one patient identifier for each patient record. | Core. |  |
|  |  | The system must link key patient identifier information (e.g. system ID, medical record number) to each patient record according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability, through a controlled method, to integrate or link information for an individual patient upon recognising the identity of the patient (e.g. if portions of a record were not yet integrated or linked because the patient's identity was not yet known, or a temporary identity was being used, or there were duplicate records). | Core. |  |
|  |  | The system must provide the ability, when health information has been mistakenly associated with a patient, to tag the information as erroneous in the record of the patient in which it was mistakenly associated and render that information as erroneous in all renderings (i.e. outputs) containing that information. | Core. |  |
|  |  | The system must provide the ability, when health information has been mistakenly associated with a patient, to link the health information with the correct patient and tag as erroneous in the wrong patient record. | Core. |  |
|  |  | The system must render appropriate health information that has been tagged as erroneous in a patient's record (e.g. identify as erroneous when rendering or render in audit logs only). | Core. |  |
|  |  | The system must provide the ability to render parts of a single patient's record using a primary identifier (e.g. Unique patient identifier, encounter number), secondary identifiers (e.g. Identification Number), or other information, or combination of information, which are not identifiers, but could be used to help identify the patient (e.g. name or Date of Birth). | Core. |  |
|  |  | The system must provide the ability to tag as obsolete, inactivated or nullified, to store in archives and to remove a patient's record in accordance with local policies and procedures, as well as applicable laws and regulation. | Core. |  |
|  |  | The system must provide the ability to auto-populate identical data to all records of related patients. | Core. |  |
|  |  | The system must provide the ability to capture anonymised patient registration. | Core. |  |
|  |  | The system must make provision for the neonate to be linked to the mother’s family structure when a mother gives birth as an inpatient and to be registered as a patient according to DOD business rules. | Core. |  |
|  |  | The system must provide the ability to render patient records based on previous names. | Core. |  |
|  |  | The system must provide the ability to link several patients that have some common demographics. | Core. |  |
|  | Patient Care. 🡪 Patient Care Admin. 🡪 Patient Admin Record. 🡪 **Patient Identification.** | The system must provide the ability to identify a patient as eligible or not eligible to receive healthcare. | Core. |  |
|  |  | The system must provide the ability to identify a patient through biometric identifiers such as fingerprints, iris patterns, facial patterns, palm patterns and voice. | Core. |  |
|  |  | The system must make provision for inclusion of a dropdown selection and voice detection input method to assist with quick retrieval of patient information. | Non-Core. |  |
|  |  | The system must provide the ability to identify a patient by scanning the patient’s South African ID, or passport in the case of non-SA patients. | Core. |  |
|  |  | The system must provide the ability that one patient can have up to 10 different identity number types to identify a patient. Identity numbers must be linked to the patient’s biometric information and *vice versa*. The system must be customised according to DOD unique validation rules per identity number type which will be provided at bid award stage. | Core. |  |
|  |  | The system must have the ability to maintain one preferred identity type per patient | Core. |  |
|  |  | The system must provide the ability to link standard healthcare services that a patient is entitled to / authorised to for a specific period per identity number type. | Core. |  |
|  |  | The system must have an ability to manage healthcare entitlement/ authorisations for a specific period per identity number type per patient | Core. |  |
|  | Patient Care. 🡪 Patient Care Admin. 🡪 Patient Admin Record. 🡪 **Patient Registration.** | The system must provide the ability to register a patient. Patient registration includes the ability to register a patient with incomplete demographics to enable care before full registration (which is used in emergencies such as an acute myocardial infarction, disaster response, or mass casualty event). | Core. |  |
|  |  | The system must make provision for generation of a temporal system generated identification number to accommodate patients who cannot be identified at that instance, for later verification (e.g. Emergency Response patients). | Core |  |
|  |  | The system must provide the ability to capture patient registration information to accommodate an expedited registration situation (e.g. during a disaster or during a census overload at a facility). | Core. |  |
|  |  | The system must provide the ability to harmonise information generated during an expedited registration process with the EHR. | Core. |  |
|  |  | The system must provide the ability to obtain patient registration information from the DOD HR system. | Core. |  |
|  |  | The system must capture and store patient biometric information during patient registration. | Core. |  |
|  |  | The system must be able to interface with Department of Home Affairs system for biometric verification. | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Admin. 🡪 Patient Admin Record. 🡪 **Patient Demographics.** | The system must provide the ability to maintain patient demographic information. Patient demographic information includes patient groups, main member’s organisational unit, names, addresses, phone numbers, email addresses, date of birth, gender, race, and ethnicity, religious body, info about patient's contacts, methods of contact (e.g. email or telephone), and modes of contact. | Core. |  |
|  |  | The system must have the ability to keep history of force number suffix changes as the patient moves through military categories. | Core. |  |
|  |  | The system should have an ability to print labels with patient demographic information in barcode/QR Code and text format. | Non-core |  |
|  |  | The system must have the ability to link multiple patients to a patient group, a patient can be linked to more than one group for a specified period | Core. |  |
|  |  | The system must have an ability to create multiple patient groups | Core. |  |
|  |  | The system must provide the ability to capture medical aid/fund information per patient | Core |  |
|  |  | The system must have the ability to capture and manage patient’s organisational information that includes arm of service, division and unit code as per validation rules to be provided at contracting stage | Core |  |
|  |  | The system must provide the ability to record, store and render a patient’s address as global positioning system (GPS) coordinates. | Core. |  |
|  |  | The system must provide the ability that a patient can share his/her location, to update the patient’s residential address, expressed in GPS coordinates. | Core. |  |
|  |  | The system must provide the ability to capture, maintain and render demographic information as distinct data as part of the patient record. | Core. |  |
|  |  | The system must provide the ability to manage historic information for demographic data including prior names, addresses, phone numbers and email addresses. | Core. |  |
|  |  | The system must render a set of patient identifying information at each interaction with the patient record, according to RSA industry standards, scope of practice, organizational policy, and/or jurisdictional law (e.g. a certain realm may require that the patient's picture appear on every screen that is used during a provider's face-to-face interactions with the patient). | Core. |  |
|  |  | The system must store the demographic information (and other meaningful individual identifiers) separately from clinical data for identity protection purposes. | Core. |  |
|  |  | The system must provide the ability to capture valid date/time values in distinct fields (e.g. 2023/12/31), including valid incomplete or partial date/time values (e.g. 2023/12). | Non-Core. |  |
|  |  | The system should provide the ability to enter a partial date/time if the exact date/time of birth or death is unknown (e.g. year/month only). The system must require and record the reason for not knowing the exact date/time information. | Non-Core. |  |
|  |  | The system must provide the ability to capture the patient's gender used for administrative purposes (as distinct from the clinical gender). | Core. |  |
|  |  | The system must provide the ability to manage multiple active addresses for the patient. | Non-Core. |  |
|  |  | The system must provide the ability to manage multiple active phone numbers for the patient. | Core. |  |
|  |  | The system must provide the ability to manage the names and contact information of the patient's personal representatives (e.g. guardian, surrogate or financial guarantor) and personal relationships (e.g. foster parents or biological parents). | Core. |  |
|  |  | The system must provide the ability to manage the date/time of birth, down to the minute, according to RSA industry standards, scope of practice, organizational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system should provide the ability to capture patient demographics through integration with external hospital systems to facilitate patient registration. | Non-Core. |  |
|  |  | The system should provide the ability for the patient to annotate demographic data. | Non-Core. |  |
|  |  | The system must determine and render a patient's age and age units for any given date. | Core. |  |
|  |  | The system should analyse and render potential merge matches for registrations according to organizational policy. | Non-Core. |  |
|  |  | The system must provide the ability to manage multiple patient names in each name component field (e.g. first, middle, last, suffix, or title). | Core. |  |
|  |  | The system must provide the ability to manage patient names that include any accent marks or special characters. | Core. |  |
|  |  | The system must provide the ability to link family or group members so that information that is common to all the members can be updated. | Core. |  |
|  |  | The system should provide the ability to capture information regarding a patient's occupation. | Non-Core. |  |
|  |  | The system must provide the ability to capture a patient's special-interest requirements (e.g. divers, firefighters, or airline pilots whose abilities to perform their occupations may be impacted based on a given diagnosis, and/or treatment). | Core. |  |
|  |  | The system should provide the ability to analyse the data quality of a patient's information (e.g. vital records information regarding the higher data quality of the date-and-time-of-death on one record, versus the lower data quality of the month-of-death on another record). | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Admin. 🡪 Patient Admin Record. 🡪 **Subject to Subject Relationship.** | The system must provide the ability to capture, maintain and render subject to subject relationships. Subject to subject relationship concerns information about relationships between patients and others that facilitate healthcare and access to health information. | Core. |  |
|  | Patient Care. 🡪 Patient Care Admin. 🡪 Patient Admin Record. 🡪 Subject to Subject Relationship. 🡪 **Related by Family Structure.** | The system must provide the ability to capture, maintain and render genealogical relationship information, which may include genetic mother, next of kin, or family members. | Core. |  |
|  |  | The system must have the ability to indicate the patient’s position in the relationship structure (e.g. Main member, Spouse1-n, biological child of main member/of spouse, step-child of main member/of spouse, adopted child of main member/of spouse) | Core |  |
|  |  | The system must provide the ability to capture, maintain and render the identity of persons related by family structure to the patient. | Core. |  |
|  |  | The system should provide the ability to capture, maintain and render patient consents to enable patient records to be viewed by a family member. | Non-Core. |  |
|  |  | The system must provide the ability to transmit family history entries to the EHRs of family members according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to keep and present history of related-by-genealogy structures. | Core. |  |
|  | Patient Care. 🡪 Patient Care Admin. 🡪 Patient Admin Record. 🡪 Subject to Subject Relationship. 🡪 **Related by Insurance.** | The system must provide the ability to capture, maintain and render relationships by insurance, which identifies the relationships between persons under the same insurance (medical aid) plan (e.g. domestic partner, spouse, and guarantor of payment). | Core |  |
|  |  | The system should provide the ability to display information regarding patients who are related by insurance plan. | Non-Core. |  |
|  |  | The system must provide the ability to keep and present history of related-by-insurance structures. | Core. |  |
|  | Patient Care. 🡪 Patient Care Admin. 🡪 Patient Admin Record. 🡪 Subject to Subject Relationship. 🡪 **Related by Living Situation.** | The system should provide the ability to capture, maintain and render relationships between patients based on living situation (e.g. in the same household, military deployment, college dormitory). Related by living situation information can help providers uniquely identify patients or identify illnesses that may occur within a certain proximity. It may be historical, e.g. mother pregnant during extreme famine or while working in a chemical plant. | Non-Core. |  |
|  |  | The system should provide the ability to display living situation related information. | Non-Core. |  |
|  |  | The system must provide the ability to keep and present history of related-by-Living-Situation structures. | Core. |  |
|  | Patient Care. 🡪 Patient Care Admin. 🡪 Patient Admin Record. 🡪 Subject to Subject Relationship. 🡪 **Related by Other Means.** | The system should provide the ability to capture, maintain and render information regarding persons related to the patient other than by genealogy, insurance, and/or living situation according to RSA industry standards, scope of practice, organizational policy, and/or jurisdictional law. Related by other means, may include, for example, surrogate mother, guardian, a person authorised to see health records, healthcare surrogate, and persons potentially related by epidemiological exposure. | Non-Core. |  |
|  |  | The system must provide the ability to render information regarding patients related by employer/DOD service and division and work location for purposes of epidemiological exposure and public health analysis and reporting. | Core. |  |
|  |  | The system must provide the ability to render information regarding persons with "Power of Attorney for Health Care" or other persons with the authority to make medical decisions on behalf of the patient. | Core. |  |
|  |  | The system must provide the ability to keep and present history of related-by-other means structures, per relation of other means. | Core. |  |
|  | Patient Care. 🡪 Patient Care Admin. 🡪 Patient Admin Record. 🡪 **Patient Preferences.** | The system must provide the ability to capture, maintain and display patient preferences. Patient preferences include anything that might be important to care delivery such as language, religion, spiritual practices, culture and preferred HCP per patient problem and/or healthcare discipline. This function must be available at the PoC. Patient preferences differ from social history and advance directives (see below): social history refers primarily to elements of a patient's background that may impact on his/her health (e.g. smoking, drinking, occupation, abuse, etc). Patient preferences are integrated with CDS, which take into consideration these preferences. They also integrate with, and are easily retrieved from, the health record. Preferences may be specified for all, specific, or a set, of treatment plans, and may be used to adjust patient information including labelling and medication instructions (e.g. for language and print size). | Core. |  |
|  |  | The system must provide the ability to manage patient preferences (e.g. language(s), religion, spiritual, cultural practices, reluctance to use an antibiotic and reluctance to use any medication). | Core. |  |
|  |  | The system must provide the ability to manage family preferences (e.g. language(s), religion, spiritual and cultural practices) | Core. |  |
|  |  | The system should provide the ability to manage patient and family preferences based on business rules. | Non-Core. |  |
|  |  | The system should provide the ability to render, at appropriate decision points, patient and family preferences as they pertain to current and planned treatment plans and orders. | Non-Core. |  |
|  |  | The system should provide the ability to integrate patient and family preferences with appropriate health education materials (e.g. dietary advice based on dietary preference). | Non-Core. |  |
|  |  | The system should provide the ability to capture, maintain and render patient and family preferences as they pertain to current treatment plans. | Non-Core. |  |
|  |  | The system should provide the ability to update care guidelines and options relating to documented patient and family preferences, including standards of practice (e.g. treatment options for individuals who refuse blood transfusions). | Non-Core. |  |
|  |  | The system should provide the ability to analyse care guidelines and options relating to documented patient and family preferences, including standards of practice. | Non-Core. |  |
|  |  | The system should provide the ability to render prompts for testing and treatment options based on patient and family preferences. | Non-Core. |  |
|  |  | The system should provide the ability to render a comparison between standard practice and testing or treatment options based on patient and family preferences. | Non-Core. |  |
|  |  | The system should provide the ability to receive external materials (e.g. teaching materials and product labels) based on patient and family preferences. | Non-Core. |  |
|  |  | The system should provide the ability to integrate necessary documentation of patient and family preferences (e.g. living wills, advance directives, healthcare proxies. | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Admin. 🡪 Patient Admin Record. 🡪 **Patient Advance Directives.** | The system must provide the ability to capture, maintain and render patient advance directives. Patient advance directives are care-related requests for when the patient is unable to competently decide about his/her own care. It may include, e.g. living will, durable power of attorney, preferred interventions for known conditions, or a "do not resuscitate" order. It includes the date and circumstances (where, how and when recorded) under which directives were received, and the location of paper/electronic advance directive documentation. | Core. |  |
|  |  | The system must provide the ability to manage advance directive information including the type of directive, relevant dates and statuses (e.g. received, reviewed, rescinded, updated), circumstances under which the directives were received (e.g. during initial consultation), and the location of any paper or electronic advance directive documentation. | Core. |  |
|  |  | The system must render an indication that advance directive(s) have been captured. | Core. |  |
|  |  | The system must provide the ability to render the type of advance directives captured for the patient (e.g. living will, durable power of attorney, preferred interventions for known conditions, or the existence of a "Do Not Resuscitate" order). | Core. |  |
|  |  | The system must provide the ability to manage "Do Not Resuscitate" orders. | Core. |  |
|  |  | The system must provide the ability to capture externally-sourced scanned patient advance directive documents, and/or "Do Not Resuscitate" orders. | Core. |  |
|  |  | The system should provide the ability to manage the date and circumstances of the most recent review of the advanced directives. | Non-Core. |  |
|  |  | The system must provide the ability to manage the identity and role of the principal acting on behalf of the provider to capture and complete the advance directive for the patient. | Core. |  |
|  |  | The system must provide the ability to manage the date and time an advance directives paper document was signed/completed by the patient or patient representative. | Core. |  |
|  |  | The system must provide the ability to capture and sign an advance directive electronically (electronic signature). | Core. |  |
|  | Patient Care. 🡪 Patient Care Admin. 🡪 Patient Admin Record. 🡪 **Patient Consent and Authorisation.** | The system must provide the ability to manage patient consent and authorisation. Patient consent and authorisation are patient decisions regarding informed consent/authorisation for treatment including participation in clinical trials and other research projects) and the disclosure of their information. These decisions must be recorded and include the extent to which the patient was pre-informed about the implications of a decision, so as to foster patient discretion in care being delivered or withheld. Assent may be legally required. The function includes patient authorisation for re-disclosure of sensitive information to third parties. In particular, it includes privacy consent directives, which stipulate the specific privacy preferences of a patient. Consent may be for a specific disclosure, for a period of time, or until it is explicitly revoked. It is enforced by a combination of consent and associated privacy policies, access control, secure messaging, and secure data routing. The function provides standardised forms for patients and guardians including foster parents. | Core. |  |
|  |  | The system must provide the ability to capture and render an indication that a patient has completed a consent and authorisation (e.g. the patient completes an eye surgery -related consent before receiving eye surgery, the patient consent to the use of telehealth technology, or patient consent to participate in a research project or clinical trial). | Core. |  |
|  |  | The system must provide the ability to capture and render an indication that a patient has withdrawn applicable consents and authorisations. | Core. |  |
|  |  | The system must provide the ability to capture scanned consent and authorisation paper documents. | Core. |  |
|  |  | The system must provide the ability to present consent and authorisation forms on-line. | Core. |  |
|  |  | The system should provide the ability to enter consent and authorisation forms on-line, with appropriate electronic signature, according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  |  | The system must provide the ability to record, store and render informed consent that was provided orally. It is specifically required for telehealth encounters. | Core. |  |
|  |  | The system must provide the ability to render printable consent and authorisation forms/form templates. | Core. |  |
|  |  | The system must provide the ability to generate different consent and authorisation templates according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must render the consents and authorisations as part of the patient's record during a specific clinical activity, (e.g. a treatment or a surgery or telehealth encounter). | Core. |  |
|  |  | The system must provide the ability to render consents and authorisations chronologically, reverse chronologically, and by type of consent or authorisation. | Core. |  |
|  |  | The system must provide the ability to capture an assent for patients who are legally unable to consent. | Core. |  |
|  |  | The system must provide the ability to capture the source of each consent, such as the patient or the patient's personal representative if the patient is legally unable to provide it. | Core. |  |
|  |  | The system must provide the ability to manage information regarding the patient's personal representative, advocate, healthcare proxy, legal representative, financially responsible entity or other similar person or entity, including their level of authority to make medical or financial decisions on behalf of the patient. | Non-Core. |  |
|  |  | The system should provide the ability to capture the patient's preferences regarding providers who are permitted to access, or explicitly excluded from accessing, the patient's information. | Non-Core. |  |
|  |  | The system should provide the ability to render disclosure events. | Non-Core. |  |
|  |  | The system should provide the ability to render an accounting of any patient identifiable information disclosed to other providers. | Non-Core. |  |
|  |  | The system must provide the ability to manage data visibility based on both privacy policy, and patient's privacy consent. | Core. |  |
|  |  | The system should provide the ability to capture patient preferences regarding receipt of immunisation (e.g. refusal of certain vaccines). | Non-Core. |  |
|  |  | The system should provide the ability to capture patient preferences regarding receipt of medication (e.g. refusal of all or certain medication). | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Admin. 🡪 Patient Admin Record. 🡪 **Service Authorisation.** | The system must provide the ability to manage service authorisations. | Core. |  |
|  |  | The system must enable the retrieval of information for verifying medical necessity and prior service authorisation at a relevant point in the encounter workflow. | Core. |  |
|  |  | The system must interact with other systems and applications to enable creation of requests, responses and appeals related to service authorisation. It includes prior authorisations, referrals, and precertification. | Core. |  |
|  |  | The system must provide the ability to capture authorisation requests for any type of healthcare service. | Core. |  |
|  |  | The system must provide the ability to approve/decline service authorisation requests for any type of healthcare service, with reason for approval/declining. | Core. |  |
|  |  | Specific service authorisation requests identified that the system must provide the ability to capture are:   1. Medical service authorisation request. | Core. |  |
|  |  | 1. Dental/orthopaedic service authorisation request. | Core. |  |
|  |  | 1. Orthotics/orthopaedic service authorisation request. | Core. |  |
|  |  | 1. Spectacle service authorisation request. | Core. |  |
|  |  | The system must provide the ability to approve/decline the following specific identified service authorisation requests with reason for approval/declining:   1. Medical service authorisation request. | Core. |  |
|  |  | 1. Dental/orthopaedic service authorisation request. | Core. |  |
|  |  | 1. Orthotics service authorisation request. | Core. |  |
|  |  | 1. Spectacle service authorisation request. | Core. |  |
|  |  | The system must generate a service authorisation reference number. | Core. |  |
|  |  | The system must record the following per service authorisation request:   1. Service description (may include sessions or treatment plan). | Core. |  |
|  |  | 1. Procedure codes relevant to the special authorisation request. The system must support RSA industry standard codes | Core. |  |
|  |  | 1. Selected mouth parts per dental/orthopaedic procedure code. | Core. |  |
|  |  | 1. Diagnosis codes. | Core. |  |
|  |  | 1. Motivation for the service authorisation request. | Core. |  |
|  |  | 1. Items required (coded), including items for spectacle services. | Core. |  |
|  |  | The system must provide the ability to capture service authorisations relevant to the service provided including the source, dates, and service(s), providers and cost authorised. | Core. |  |
|  |  | The system must provide the ability to attach or link relevant, current and previous, clinical information to a service authorisation. | Core. |  |
|  |  | The system must provide the ability to attach or link relevant, current and previous, clinical information to a service authorisation request. | Core. |  |
|  |  | The system must provide the ability to capture service authorisation requests per patient including:   1. the source (requesting healthcare provider and requesting healthcare facility). 2. date and time with external service provider. 3. service(s) for which authorisation is requested, including service description, diagnosis code(s), procedure code(s) and amount to be authorised. 4. requested provider. 5. if applicable, reason for outsourcing (shortage of personnel; shortage/lack of equipment; Medical supplies problem; insufficient facilities; patient load. 6. if applicable, explanation of outsourcing reason. | Core. |  |
|  |  | The system must provide the ability to capture referrals based on authorised services, including the source, date and authorised services referred. See Referrals function. | Core. |  |
|  |  | The system must provide the ability to exchange computer readable data on service authorisations according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to manage the approval process of service authorisations. | Core. |  |
|  | Patient Care. 🡪 Patient Care Admin. 🡪 Patient Admin Record. 🡪 **Healthcare Program.** | The system should provide the ability to manage patient/client participation in healthcare programs as well as information about such programs. Healthcare programs include *inter alia* social work projects, clinical trial, self-development and awareness training programs, Person-job-fit assessments, mental health care programmes, oral health care programmes, substance abuse programs, community-based programs and wellness programs. | Core. |  |
|  |  | The system must provide the ability to capture information about patients or beneficiary groups (e.g. homeless shelter, rehabilitation centre, etc) subscribed or registered into healthcare programs (e.g. clinical trials, wellness programs or social work projects. | Core. |  |
|  |  | The system should provide the ability to manage information about health care programs (e.g. clinical trials, wellness programs or social work projects) into which the patient has been subscribed or registered. | Non-Core. |  |
|  |  | The system should provide the ability to manage separate status options for multiple healthcare programs per patient. | Non-Core. |  |
|  |  | The system must have fields to capture the Project Code, the Location Code (venue), Purpose and Notes regarding the project | Core. |  |
|  |  | The system should include the option to add new Project Codes and Location Codes over time as the list can increase and be build out over time as the organisation needs change. | Core. |  |
|  |  | The system must have the option to capture large groups of participants that for example attend Awareness training on various Psycho-Social related topics including but not limited to Workplace relationships, Conflict management etc. | Core. |  |
|  |  | The system must provide the ability to create templates and make it available via QR codes to healthcare program participants to complete. | Core. |  |
|  |  | The system must provide different search options when looking up information to populate a system field. | Core. |  |
|  | Patient Care. 🡪 Patient Care Admin. 🡪 **Encounter/Episode of Care.** | The system must provide the ability to manage encounters and episodes of care. Encounter/episode of care enables admin of healthcare rendered in an encounter/episode of care. It supports care provision functionality that consists of user interactions and workflows, both of which must be configurable according to clinical protocols and business rules.  Encounter-specific info must be recorded for each encounter, including date/time, provider(s), location(s), reason, encounter type (e.g. inpatient, outpatient, home health, assessment, medical classification examination, routine, emergency, educational, accompanying a patient, porter service, post-mortem etc.) Telehealth enables remote and virtual encounters. In turn, the encounter/episode of care function must support the unique requirements of telehealth encounters, such as recording and verifying the location of the consulting provider(s), the identity and qualifications of the consulting provider, the identity of the patient and the location of the patient.  An encounter is the focal point that links clinical, administrative, and financial information. Encounters take place in many diverse settings, which include ambulatory care, inpatient care, emergency care, home healthcare, field and virtual care (telemedicine)”, and many more.  Care provision functions occur within an encounter/episode of care. In other words, an encounter/episode of care provides the administrative framework within which clinical functions (of care provision) are performed.  Episode of care is managed care by a healthcare facility/provider for a specific medical condition during a set time period. Care can be given either for a short period or on a continuous basis or it may consist of a series of intervals marked by one or more brief separations from care.  An episode of care is likely to be associated with multiple encounters. | Core. |  |
|  |  | The system must provide the ability to manage information regarding a patient encounter, including a minimum of the following data: the date/time, providers, location, and reason for the encounter. Note that when a patient is in hospital, each time a nurse or other provider is providing healthcare, e.g. administer medication, monitor blood pressure, is an encounter that forms part of the hospital stay episode of care. | Core. |  |
|  |  | The system must provide the ability to determine and render a notification that the patient requires a follow-up encounter. | Core. |  |
|  |  | The system must provide the ability to determine or capture administrative information that is required for a follow-up encounter (e.g. co-payments, service location, prior authorisation for a chest x-ray). | Core. |  |
|  |  | The system must provide the ability to maintain and render administrative information relevant to an encounter. | Core. |  |
|  |  | The system must provide the ability to determine or capture clinical information that is required for a follow-up encounter (e.g. fasting requirements, pre-medications). | Core. |  |
|  |  | The system must provide the ability to manage a patient tele-health encounter including a minimum of the following data: date/time, providers, location and reason for the encounter. | Core. |  |
|  |  | The system must provide the ability to capture one or more complaints, presenting problems, or other reasons for the visit or encounter (e.g. chest pain, gunshot wound, and drug overdose during a single encounter). | Core. |  |
|  |  | The system must provide the ability to capture the primary reason (e.g. the chief complaint or the most important reason) for visit/encounter from the patient's perspective. | Core. |  |
|  |  | The system must provide the ability to render an indication that the patient was referred for the visit or encounter. | Core. |  |
|  |  | The system must provide the ability to generate a sick note during any encounter and to send it to the patient. The sick note must also be sent to the DOD HR system as well as to the patient’s DOD employer (member’s DOD unit). The sick note must reflect the period that the patient is booked off or having duty restrictions, the reason and the relevant Provider’s details. The sick note must be linked to the relevant encounter. | Core. |  |
|  |  | The system must provide the option to the provider to send a notification to the patient’s DOD employer (member’s DOD unit) to inform them of the appointment. The notification must include the appointment date and time, location and provider. | Core. |  |
|  |  | The system must provide the ability to mark an encounter as an appointment honoured or not honoured by the patient. | Core. |  |
|  |  | The system must accommodate the following to be captured on the sick note:   1. Name, address and qualification of the provider; 2. Name of the patient; 3. Employment number of the patient (if applicable); 4. Date and time of the examination; 5. Description of the illness, disorder, or malady in line with RSA industry standard codes; 6. Indication whether the patient is totally indisposed for duty or whether the patient is able to perform less strenuous duties in the work environment, and define period of such duties, where applicable; 7. Exact period of recommended sick leave; 8. Date of issuing the sick note; 9. Signature of the provider who issued the sick note in accordance with RSA industry standard. | Core. |  |
|  |  | The system should make provision to capture indication of whether the sick note is being issued as a result of personal observations by the provider during an examination, or as the result of information received from the patient and which is based on acceptable medical grounds. | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Admin. 🡪 Encounter/Episode of Care. 🡪 **Care Coordination.** | The system must provide the ability to coordinate patient-centred care between internal and external care providers. The system must provide the ability to communicate or report on care provided.  Information is exchanged between care participants for purposes of care coordination. It thus includes standard and ad hoc reporting and information views of the patient record. At the conclusion of an episode of care, the system must provide the ability to create health service reports (for public health) and a summary record of care (which includes summary views and reports and service reports, e.g. discharge summaries, and specialist or consultation reports).  Refer to Information exchange and Communication function requirements. | Core. |  |
|  | Patient Care. 🡪 Patient Care Admin. 🡪 Encounter/Episode of Care. 🡪 **Patient Location [in Facility].** | The system should provide the ability to track and to provide a patient’s location within a facility’s premises during an episode of care. It must include a bed assignment (e.g. John Doe, Bed 3, Ward 2) and real-time information of the patient's location when he/she is receiving ancillary services in any part of a facility (e.g. in the physical therapy or diagnostic imaging departments). A patient's location can also be derived from standard reports (e.g. an emergency department log). The system must conform to legislation regarding a patient's consent to disclose his/her location in a facility and differentiates between actors that may and may not see a patient’s location info. | Non-Core. |  |
|  |  | The system should provide the ability to render information regarding the patient's assigned location when the patient has an assigned location (e.g. specific bed). | Non-Core. |  |
|  |  | The system should provide the ability to render information regarding a patient's location based on existing patient-consent documentation and according to RSA industry standards, scope of practice, organizational policy, and/or jurisdictional laws. | Non-Core. |  |
|  |  | The system should provide the ability to manage information regarding the patient's current location (e.g. temporary location of patient). | Non-Core. |  |
|  |  | The system should provide the ability to render information regarding the patient's current location by alternate identifiers (e.g. by arrival number, by alias, or by bed-number). | Non-Core. |  |
|  |  | The system must render the de-identified list of patients who have not consented to release patient location information within a facility. | Non-Core. |  |
|  |  | The system must provide the ability to render an alert if the patient has exceeded a system-defined time in a location. | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Admin. 🡪 Encounter/Episode of Care. 🡪 **Patient Residence [for Service Provision].** | The system must provide the ability to manage patient residence for service provision to the patient at his/her place of residence.  The system must provide information regarding the patient's residence, patient transport, and as required for public health reporting. It must enable identification of multiple residences where applicable. Examples include: a nurse provides care to a new mother and baby at their home; a patient with a mobility problem needs transport to and from a clinic appointment. | Core. |  |
|  |  | The system must provide the ability to manage the patient's primary residence or place of habitation (e.g. home address or homeless shelter). | Core. |  |
|  |  | The system must provide the ability to manage the patient's secondary or alternate residence. | Core. |  |
|  |  | The system must provide the ability to manage patient information related to the provision of service (e.g. ambulance transport or home health care services). | Core. |  |
|  |  | The system must provide the ability to manage patient information related to transport, such as, mobility status and special needs. (e.g. wheelchair, walker). | Core. |  |
|  |  | The system must provide the ability to manage facility information related to patient mobility status and special needs (e.g. stairs, elevator, wheelchair access). | Core. |  |
|  |  | The system should provide the ability to manage public health reporting related patient residence information. | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Admin. 🡪 Encounter/Episode of Care. 🡪 **Clinical Coding.** | The system must support clinical coding. Clinical coding makes available patient information needed for coding of diagnoses, procedures and outcomes and assists users (such as professional coders) in coding information for clinical reporting. A coder, for example, codes the principal diagnosis in International Classification of Diseases (ICD) as a basis for hospital funding. The system presents to the coder all diagnoses and procedures pertaining to an episode, as well as the ICD hierarchy containing these codes. (Note that ICD codes are used as an example only. The system must support RSA industry standard coding). | Core. |  |
|  |  | The system must provide the ability to render patient information needed to support coding of diagnosis, procedures and outcomes. | Core. |  |
|  |  | The system must provide the ability to determine coding of diagnoses, procedures and outcomes based on provider specialty, care setting and other information that may be entered into the system during the encounter. | Core. |  |
|  |  | The system must provide the ability to analyse clinical documents for deficiencies (e.g. missing information) using coding-based rules. | Core. |  |
|  |  | The system must render the results of document coding deficiencies (e.g. missing information) analysis to the coder. | Core. |  |
|  |  | The system must provide the ability to render the results of a coding documentation deficiency analysis to the appropriate user(s) (e.g. the deficient document or a link to same). | Core. |  |
|  |  | The system should provide the ability to integrate the deficiency remediation into the coding workflow. | Non-Core. |  |
|  |  | The system must provide the ability to present configurable (e.g. with respect to content, time of presentation), standard reports that support clinical documentation coding workflow. | Core. |  |
|  |  | The system must provide the ability to present configurable (e.g. with respect to content, time of presentation), ad-hoc reports that support clinical documentation coding workflow. | Core. |  |
|  |  | The system must capture the time of care provision to facilitate correct coding. | Core. |  |
|  |  | The system must capture and maintain user preferences for how the list of diagnoses are rendered (e.g. numerical order, alphabetic order). | Core. |  |
|  |  | The system must provide the ability to link statements regarding diagnoses with codes when more than one code is required for a condition (e.g. multiple codes for a single condition, late effects and cause, aetiology and manifestation). | Core. |  |
|  | Patient Care. 🡪 Patient Care Admin. 🡪 Encounter/Episode of Care. 🡪 **Financial and Administrative Coding.** | The system must support financial and administrative coding. Financial and administrative coding assists the user with financial and administrative coding (which includes coding for invoicing) based on structured and unstructured information in encounter documentation. For example, In South Africa, the price list of the Council of Medical Schemes serves as an example. | Core. |  |
|  |  | The system must provide the ability to maintain and render financial and administrative codes. | Core. |  |
|  |  | The system must provide the ability to apply a code structure for billing according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to extract data from the EHR as required to simplify the coding of financial and administrative documentation. | Core. |  |
|  |  | The system must render rules driven prompts to facilitate the collection of data in the clinical workflow that is required for administrative and financial coding. | Core. |  |
|  |  | The system must provide the ability to determine coding required for administrative and financial documents based on provider specialty, care setting and other information that may be entered into the system during the encounter. | Core. |  |
|  |  | The system must determine (e.g. internally generate) administrative and financial coding (e.g. place of service, type of facility, tax rates, etc). | Core. |  |
|  |  | The system should provide the ability to render notification to appropriate user(s) about coding related documentation deficiencies. | Non-Core. |  |
|  |  | The system should provide the capability to render highlighting of coding related documentation deficiencies. | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Admin. 🡪 Encounter/Episode of Care. 🡪 **Care Transitions and Discharges.** | The system must provide the ability to manage care transitions and discharges. Care transitions and discharges is the admin of outstanding patient issues at transfer of care, after an encounter, or at discharge.  After an encounter, tasks can remain for discharge planning, patient instructions and transitions of care. There may be outstanding lab tests, radiology interpretations, or tasks such as arranging home health aides, transportation, or calls to a patient's primary care provider for follow-up. These tasks must be tracked and documented after the encounter. | Core. |  |
|  |  | The system must provide the ability to capture multiple discharge diagnoses and mark them as discharge diagnoses. |  |  |
|  |  | The system must provide the ability to manage post-encounter tasks (e.g. discharge planning, patient instructions, transfer activities). | Core. |  |
|  |  | The system must provide the ability to tag the patient as a transfer patient (e.g. hospital-to-hospital, birthing facility, and long-term-care-facility to hospital). | Core. |  |
|  |  | The system must provide the ability to link transfer facility demographic information to the transfer patient. | Core. |  |
|  |  | The system must provide the ability to capture the transfer mode of transportation (e.g. ambulance, airplane). | Core. |  |
|  |  | The system must provide the ability to capture transportation provider demographics. | Core. |  |
|  |  | The system must provide the ability to render an indicator that a patient record is incomplete (e.g. not finalised or authenticated/signed) when a discharge or transfer order is entered into the system. | Core. |  |
|  | Patient Care. 🡪 Patient Care Admin. 🡪 Encounter/Episode of Care. 🡪 **Encounter Documentation.** | The system must provide the ability to capture, maintain and render encounter documentation. Encounter documentation must enable data collection and must process the output of an encounter. Workflows, based on the encounter management settings, must assist (with triggers, alerts and other means) in data collection, import, export, extraction, linkages and transformation. For example, a paediatrician must be presented with diagnostic and procedure codes specific to paediatrics. Business rules must enable automatic data collection from the patient's health record and patient registry. As the provider enters data, workflow processes must be triggered to populate transactions and documents. For example, data entry might populate an eligibility verification transaction or query the immunisation registry. | Core. |  |
|  |  | The system should determine and render workflow support for data collection in a care setting. | Non-Core. |  |
|  |  | The system should provide the ability to capture and maintain encounter and care setting specific data entry workflows. | Non-Core. |  |
|  |  | The system must provide the ability to extract information from the patient record as necessary to support documentation of the patient encounter. | Core. |  |
|  |  | The system must capture and maintain a reduced set of diagnostic and procedure codes for the care setting. | Core. |  |
|  |  | The system should analyse the information entered into the encounter and based on business rules, initiate secondary reporting workflows. | Non-Core. |  |
|  |  | The system must provide the ability to record audio encounter notes and to translate it to text. | Core. |  |
|  |  | The system must store the audio recording of the encounter notes (dictation) unchanged and link it to the notes converted to text. | Core. |  |
|  |  | The system must provide the ability to render voice recorded encounter notes in audible/voice format. | Core. |  |
|  |  | The system must provide the ability to render voice recorded encounter notes together with the relevant text-converted notes. | Core. |  |
|  |  | The system must provide the ability to capture encounter documentation by direct keyboard entry of text. | Core. |  |
|  |  | The system must provide the ability to capture encounter documentation through structured data entry utilising templates, forms, pick lists or macro substitution (e.g. daily tick sheets for community nursing care). | Core. |  |
|  |  | The system must provide the ability to capture and annotate patient encounter data from external systems, such as diagnostic tests and reports. | Core. |  |
|  |  | The system must provide the ability to record, maintain and render per encounter:   1. encounter identification. | Core. |  |
|  |  | 1. patient identification. | Core. |  |
|  |  | 1. provider/s identification. (Unlimited number of providers must be catered for per encounter). | Core. |  |
|  |  | 1. role per provider, e.g. roles of provider in charge, consulting providers, (admission provider, referring provider, discharge provider, accompanying provider etc. | Core. |  |
|  |  | 1. encounter start and end dates. | Core. |  |
|  |  | 1. encounter start and end times. | Core. |  |
|  |  | 1. location of the encounter. | Core. |  |
|  |  | 1. distances travelled by the provider in the case of community nursing care. | Core. |  |
|  |  | 1. encounter type. | Core. |  |
|  |  | 1. reason for the encounter. | Core. |  |
|  |  | 1. diagnosis made at encounter. | Core. |  |
|  |  | 1. procedures performed during encounter. | Core. |  |
|  |  | 1. healthcare discipline-specific data applicable to the encounter. Current requirements for discipline-specific data are listed below. | Core. |  |
|  |  | * 1. OHS encounter: noise exposure history. | Core. |  |
|  |  | * 1. Audiology: air conduction history indicating percentage loss of hearing (PLH) per patient over a time period. | Core. |  |
|  |  | * 1. Audiology encounter: acoustic reflex results recorded; bone condition results; paediatric audiology results recorded; speech and audiometry results; tympanogram results recorded; speech and audiometry notes by a specific healthcare provider. | Core. |  |
|  |  | * 1. Speech therapy, audiology, OHS or comprehensive health assessment (CHA) encounter: air conduction (PureTone) results recorded. | Core. |  |
|  |  | * 1. Speech therapy and audiology: test results and procedures for patients. | Core. |  |
|  |  | * 1. Vital signs (APGAR) at point of encounter, during transfer and handover. |  |  |
|  |  | 1. The system must be customisable to address additional discipline-specific data requirements. | Core. |  |
|  |  | 1. Data obtained/downloaded from medical equipment and devices applicable to the encounter. | Core. |  |
|  |  | 1. Documentation and notes from other providers that are reviewed or amended during the encounter and the reason for amendment. | Core. |  |
|  |  | 1. Documentation, notes and voice & video recordings with consulting providers and patients during telehealth encounters. | Core. |  |
|  |  | 1. Transport requirements of the patient. | Core. |  |
|  |  | 1. Encounter outcome of care. | Core. |  |
|  |  | 1. Encounter end status. | Core. |  |
|  |  | 1. Encounter care recommendations. | Core. |  |
|  |  | 1. Information and advice given to the patient | Core. |  |
|  |  | 1. Encounter admin documentation such as discharge documents signed by the patient through electronic signature. | Core. |  |
|  | Patient Care. 🡪 Patient Care Admin. 🡪 Encounter/Episode of Care. 🡪 **Patient Declaration.** | The system must provide the ability for the patient to declare correctness of information provided during an encounter, e.g. information provided during a hospital admission encounter with a nurse. | Core. |  |
|  | Patient Care. 🡪 Patient Care Admin 🡪 **Case Management.** | The system must have the capability to support the goals of value-based care by promoting cost-effective strategies to support better quality, improved outcome and high patient/customer satisfaction. | Core. |  |
|  |  | The system must provide a call centre management tool with case reporting with case history visibility. | Core. |  |
|  |  | The system must have an e-mail ticketing capability manage distribution and monitoring of medical claims. Refer to e-mail ticketing function. | Core. |  |
|  | Patient Care. 🡪 Patient Care Admin. 🡪 Case Management 🡪 **Finance (Care Related).** | The system must provide the ability to capture and maintain clinical data for administrative and financial requirements. | Core. |  |
|  |  | The system must transmit appropriate data according to RSA health finance industry standards and according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to extract formularies, preferred providers, and other information, from internal or external sources, that are associated with a patient's health care plan and benefits so that the provider can offer cost effective alternatives to patients. | Non-Core. |  |
|  |  | The system must provide the ability to provide information about exemptions on benefits, limitations and guidelines. | Non-Core. |  |
|  |  | The system must provide the ability to manage healthcare facility data required to assess health care cost per facility (e.g. theatre time). | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Admin. 🡪 Case Management 🡪 Finance (Care Related). 🡪 **Cost Management.** | The system must provide the ability to do cost management which includes cost monitoring and cost performance. Cost management of patient care is enabled by integration between financial, clinical and admin information. Clinical services are linked to costs (based on one or more consistently maintained service costing models) and prices | Core. |  |
|  |  | The system must provide the ability to manage cost performance in real-time.  Note: Cost performance is described as cost performance measures, analyses, and reports on costs incurred by providers, patients, facilities, and other resources. Cost performance monitoring is done on a continuous basis, and periodically provides core performance information to the resource performance function. | Core. |  |
|  | Patient Care. 🡪 Patient Care Admin. 🡪 Case Management 🡪 Finance (Care Related). 🡪 **Invoicing.** | The system must provide the ability to manage invoicing described as: Invoicing generates detailed, itemised invoices for services rendered (e.g. during an episode of care in hospital, in an outpatient encounter with a general practitioner (GP), in an encounter with an oral health provider, by a pharmacy/dispensary dispensing medication, or as a radiology procedure).  Note: As a practice, the services are not rendered to patients that are not classified as beneficiaries of DOD healthcare services. When services are rendered for those not classified as beneficiaries, an invoice must be generated according to RSA industry standards to be sent to the organisation or individual responsible for payment. | Core. |  |
|  |  | The system must provide an invoice management[[4]](#footnote-4) capability in accordance to industry standards. | Core |  |
|  |  | The system must provide the ability to generate electronic invoices for DOD (non-paying) patients (individuals or groups) for purposes of costing, planning and budgeting. Pricing can be cost-based (e.g. cost + x%), based on a price list, or a combination of these. | Core. |  |
|  |  | The system must provide the ability to render available information needed to enable the creation of claims and encounter reports for reimbursement and for budgeting purposes. | Core. |  |
|  |  | The system must provide the ability to capture and render available data as required for audit and review according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to render available data in a computer readable form when needed to enable the creation of claims and encounter reports for reimbursement. | Core. |  |
|  |  | The system must provide the ability to render data, using reporting tools, to support coding of diagnosis, procedure and outcomes. | Core. |  |
|  |  | The system must provide the ability to provide RSA industry standard coding-based cost estimate for patients and for requests not linked to a specific patient. | Core. |  |
|  |  | The system must provide the ability to record information from multiple cash receipt vouchers per patient. | Core. |  |
|  |  | The system must provide the ability to allow the patient to accept responsibility for payment of services to be rendered. | Core. |  |
|  | Patient Care. 🡪 Patient Care Admin. 🡪 🡪 Case Management 🡪 Finance (Care Related) 🡪 **Claims Reimbursement.** | The system must provide the ability to manage claims reimbursement. Claims reimbursement interacts with external systems (of external providers/organisations that render healthcare services to the organisation) to enable the organisation to reimburse providers/organisations for services rendered. | Core. |  |
|  |  | The system must provide the ability to receive invoices from external providers for services rendered to the organisation and individual eligible beneficiaries according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to link invoices received from external providers to the relevant referral (service request to external provider) according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to manage external provider invoice detail as distinct data elements according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must be able to accommodate paper format and invoices received via electronic data interface (EDI) according to RSA industry standard. | Core |  |
|  |  | The system must provide the ability to pay invoices from external service providers. | Core |  |
|  |  | The system must provide the ability to track the status of invoices processing according to RSA industry standards, to scope of practice, organisational policy, and/or jurisdictional law. | Core |  |
|  |  | The system must make provision for linking of invoices to patient profiles. | Core |  |
|  | Patient Care. 🡪 Patient Care Admin. 🡪 Case Management 🡪 Finance (Care Related). 🡪 **Eligibility Verification.** | The system should enable eligibility verification described as: Eligibility verification interacts with external systems (of medical aids of organisations to which the organisation renders a service) to enable the organisation to verify whether a patient is eligible for a particular healthcare service. | Non-Core |  |
|  |  | The system should provide the ability to capture patient health plan eligibility information for date(s) of service. | Non-Core |  |
|  |  | The system should provide the ability to exchange electronic eligibility information (e.g. health plan coverage dates) with internal and external systems. | Non-Core |  |
|  |  | The system should provide the ability to capture general benefit coverage information for patients. | Non-Core |  |
|  |  | The system should store eligibility date(s) of service, coverage dates, general benefits and other benefit coverage documentation for service rendered according to scope of practice, organizational policy, and/or jurisdictional law. | Non-Core |  |
|  |  | The system should provide the ability to capture electronic eligibility information from internal and external systems. | Non-Core |  |
|  |  | The system should provide the ability to render information received through electronic prescription eligibility checking. | Non-Core |  |
|  |  | The system should provide the ability to capture and maintain patient registration in special programs (e.g. registries and case management). | Non-Core |  |
|  |  | The system should provide the ability to analyse for inconsistencies present in eligibility and coverage information (e.g. coverage dates, patient identity data, coverage status), as captured, and render a notification to the user on inconsistencies present. | Non-Core |  |
|  |  | The system should provide the ability to render information received through provider eligibility checking. | Non-Core |  |
|  |  | The system should capture and render the results of electronic prescription eligibility and health plan/payer formulary verification of prescription coverage. | Non-Core |  |
|  |  | The system should capture and render patient-specific health plan/payer formulary and benefit coverage. | Non-Core |  |
|  | Patient Care. 🡪 Patient Care Admin. 🡪 **Patient Belonging Admin.** | The system should make provision for capturing, storing and presenting of the patient’s belongings image/photo and link it to the encounter. | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Admin. 🡪 **Patient Home Medication Admin**. | The system should provide the ability to manage patient home medication, brought with the patient to a care facility, when a patient is admitted. | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Admin. 🡪 Patient Home Medication Admin. 🡪 **Patient** **Home Medication Registration.** | The system should provide the ability to manage home medication registration. | Non-Core. |  |
|  |  | The system should provide the ability to register patient home medication in the patient home medication inventory of the relevant healthcare facility. This inventory entry must be linked to the patient admission record. | Non-Core. |  |
|  |  | Patient home medication is placed in an appropriately marked envelope, sealed, labelled according to the conditions required for the specific type of medication. The system should provide the ability to print a label to mark the envelope with the patient home medication. | Non-Core. |  |
|  |  | The system should provide the ability to deliver a home-medication-receipt that contains the details of the home medication and the location of safe-keeping to the patient for later claiming his/her home medication. Provision must be made for electronic receipts as well as printed receipts. | Non-Core. |  |
|  |  | The system should provide the ability that the patient, whose home medication is handed in, can electronically sign to accept that the home medication is handed in and stored on the patient’s own risk. | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Admin. 🡪 Patient Home Medication Admin. 🡪 **Patient Home Medication Release.** | The system should provide the ability to manage release of patient home medication described as: Patient home medication release identifies the patient and uses the presented home-medication receipt to locate the patient’s home medication. The envelope with the patient’s home medication is opened by the patient or representative and the content is compared to the related receipt detail, taking in consideration that some of the medication was administered to the patient during the encounter/episode of care. The patient/patient representative signs to confirm receipt of his/her home medication and that the inventory has been updated accordingly. | Non-Core. |  |
|  |  | The system should provide the ability to locate the patient home medication through the relevant home medication receipt. | Non-Core. |  |
|  |  | The system should provide the ability to record the date and time as well as the details (including electronic signature) of the person that collects the patient home medication. | Non-Core. |  |
|  |  | The system should provide the ability to update the status of the relevant patient home medication inventory entry to reflect that the home medication has been collected. | Non-Core. |  |
|  | Patient Care. 🡪 Patient Care Admin. 🡪 Patient Home Medication Admin. 🡪 **Lost Patient Home Medication.** | The system should provide the ability to manage loss of patient home medication handed in for safe keeping. Lost patient home medication function is used when patient home medication handed in for safe keeping have been lost. Lost home medication is reported to the patient. | Non-Core. |  |
|  |  | The system should provide the ability to update the relevant patient home medication inventory to reflect that the home medication that were handed in for safe keeping has been lost. | Non-Core. |  |
|  |  | The system should provide the ability to notify the patient that his/her home medication got lost while in safe keeping at the relevant healthcare facility. | Non-Core. |  |

## Population care requirements

Population care requirements are expressed in Table 7 below, per functions as listed below.

1. Preventive care support
2. Research
3. Epidemiological investigation
   1. Data collection
      1. Psychological and social questionnaires and interviews
   2. Data analysis
      1. Psychological and social questionnaire and interview response analysis
   3. Data sharing
4. Risk alert and response
5. Risk response monitoring
6. Donors admin
7. Public health reporting
8. Consistency of care
9. Health study identifiers
10. De-identification
11. Healthcare program

Column a of Table 7 reflects function names. The function for which descriptions and requirements are provided in column b, are typed in bold font. Functional hierarchy that provides context for the function in bold is indicated using arrows.

Column b of Table 7 contains the description and requirements relevant to the function stated in bold in column a.

Column c of Table 7 is used to indicate whether a requirement is considered as a core or non-core requirement. A requirement is classified as core when it must be satisfied by the eHealth system. Non-core requirements are considered as ‘nice-to-have’ requirements.

The bidder must indicate in Column d of Table 7, for each requirement, as indicated in the table below. Bidders are encouraged to provide additional information as comment per requirement (column d of Table 7).

Table 6 – Response legend (Population Care)

| **Response indicator** | **Definition** |
| --- | --- |
| Y | The functionality exists in the proposed system (no development is required) |
| YC | The proposed system must be customised with minor development to meet the requirement |
| YD | The functionality does not exist and must be developed to meet the requirement |
| N | The functionality does not exist in the proposed system and cannot be developed |

**NOTE:** Where “according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law” is stated as part of a requirement it means that the system must be configurable to accommodate different rules and processes over time, based on RSA industry standards, SAMHS scope of practice, SAMHS policy and/or jurisdictional law.

Table 7 – Population care requirements

| **No** | **Function** | **Description and Requirements** | **Core**  **Non-Core** | **Bidder response & comment:**  **Y = Yes exist**  **YC = Customise, Minor development**  **YD = Can be developed**  **N = Not available** |
| --- | --- | --- | --- | --- |
| **a** | **b** | **c** | **d** |
|  | Population Care. 🡪 **Preventive Care Support.** | The system must provide the ability to enable preventive care support. Preventive care support continuously evaluates patient information in support of health maintenance, preventive care and wellness. When required, it generates patient-specific alerts, notifications and reminders, which are directly sent as non-interactive messages to affected patients and/or providers. Such messages can also appear as decision support prompts (which are displayed in function to a provider during a patient encounter). The aforesaid evaluation uses CDS criteria for disease management, preventive care, and wellness. Communication is essentially triggered when care is due/overdue.  Examples of alerts include patient-specific suggestions/reminders of e.g. routine immunisations; screening tests/exams, and other preventative services in support of routine preventive and wellness care in areas such as adult and childcare and age and gender-appropriate screening exams.  Examples of notifications and reminders include time-sensitive patient and provider notification of follow-up appointments, lab tests, reminders of repeat prescribed medication that is ready for collection, immunisations or examinations. Notifications are customisable in terms of timing, repetition and admin reports, e.g. a test reminder is sent to a patient two months before the test is due, repeated three-monthly, and reported to the provider when it is nine months overdue.  Alerts, notifications, reminders, and prompts related to preventive care support must be triggered by CDS. Alerts, notifications, reminders are conveyed as messages by the unidirectional communication function. | Core. |  |
|  |  | The system must provide the ability to manage criteria for disease management, wellness, and preventative services based on patient demographic data (minimally age and gender). | Core. |  |
|  |  | The system must provide the ability to capture and maintain the rules or parameters upon which guideline-related alerts are based. | Core. |  |
|  |  | The system must provide the ability to manage CDS criteria for disease management, wellness, and preventative services based on clinical data (e.g. problem/diagnosis list or current medications). | Core. |  |
|  |  | The system must provide the ability to render alerts based on recognised-standard guidelines, and/or locally-defined standard guidelines. | Core. |  |
|  |  | The system must provide the ability to render a list of all alerts along with the scheduled date and time for the preventative care and wellness. | Core. |  |
|  |  | The system must provide the ability to render a history of all alerts that were generated per patient. | Core. |  |
|  |  | The system must provide the ability to capture and maintain reasons why disease management or preventative services/wellness prompts were overridden. | Core. |  |
|  |  | The system must provide the ability to capture and maintain documentation that a preventative or disease management service has been performed based on activities documented in the patient record (e.g. vital signs taken). | Core. |  |
|  |  | The system must provide the ability to capture and maintain documentation that a disease management or preventative service has been performed with associated dates or other relevant details recorded. | Core. |  |
|  |  | The system must provide the ability to capture, maintain and render alerts to individual patients regarding their specific clinical situation. | Core. |  |
|  |  | The system must determine when the patient’s monitored health parameters have exceeded threshold values according to RSA industry standards, scope of practice, and/or organisational policy, and transmit an alert to a patient’s provider or to the patient’s care team. | Core. |  |
|  |  | The system must determine and render notifications regarding drug interaction(s) (e.g. drug-drug, drug duplication, drug-disease, drug-allergy, and/or drug-food) to the patient’s provider or to the patient’s care team when changes are made to a population health decision support rule set according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must capture, maintain, and render timely notifications to patients, and/or appropriate providers of preventative services, tests or behavioural actions that are due or overdue on an individual patient. | Core. |  |
|  |  | The system must capture in the patient’s record a history of preventative service and wellness related system notifications regarding that patient. | Core. |  |
|  |  | The system must provide the ability to determine and present overdue preventative services. | Core. |  |
|  |  | The system must provide the ability to capture, maintain and render configuration parameters regarding patient notifications (e.g. number of repetitions of the notification, timing of the notification, escalation in priority). | Core. |  |
|  |  | The system must provide the ability to update content of preventative service and wellness related notifications, guidelines, reminders and associated reference materials. | Core. |  |
|  |  | The system must provide the ability to manage the guidelines, criteria or rules that trigger the preventative service and wellness related notifications. | Core. |  |
|  |  | The system must provide the ability to manage the lifecycle of preventative service and wellness related notifications and reminders (e.g. mode of communication or timing of escalation from reminder to urgent alert). | Core. |  |
|  |  | The system must provide the ability to capture and maintain the documentation of manual outreach activities (e.g. e-mail, letter or associated telephone conversation). | Core. |  |
|  | Population Care. 🡪 **Research.** | The system must provide the ability to enable research on any subject in the domain of healthcare. The most common type of research in this area is arguably the epidemiological investigation (as overviewed below). It is also a useful example of the methodology of research which, in essence, follows the generic approach of data collection, data analysis and data sharing, that can be applied in any research study. Research related requirements are addressed under epidemiological investigation, health study identifiers and research participant care. | Core. |  |
|  |  | The system must capture research protocol deviation information, including any verbatim text of protocol deviation per research study. | Core. |  |
|  |  | The system must provide the ability to capture/register a research study. Research study description, research protocol and criteria for participation must be included. | Core. |  |
|  |  | The system must provide the ability to register patients as participants in research. Refer to research participant care function. | Core. |  |
|  |  | The system must provide the ability to store research data securely and to deposit research results (findings, papers, dissertations and theses) as well as academic articles cleared by the relevant authority to establish a Knowledge Office for research purposes in the organisation. | Core. |  |
|  |  | The system must provide the ability to request approval for research and the research protocol and to facilitate the approval process. This includes administration of research ethical clearance. | Core. |  |
|  |  | The system must provide the ability to scan tick sheets and questionnaires to enable analysis of the research data. | Core. |  |
|  |  | The system must provide the ability to be configured to collect, store and render data according to the relevant research protocol that dictates the data requirements. | Core. |  |
|  |  | The system should allow for the creation of questionnaires that can be completed electronically by participants. | Core. |  |
|  |  | The system should allow for the electronic distribution of questionnaires to targeted populations. | Core. |  |
|  |  | The system must provide the ability to import existing research data from external sources. | Core. |  |
|  |  | The system must provide for electronic recruitment of research participants by means of various modes of electronic communication | Core. |  |
|  |  | The system should allow for research participants to electronically consent or not consent to participate in a project. | Non-Core. |  |
|  |  | The system must support internal research process administrative requirements, such as electronically submitting a research proposal to the research ethics Committee. | Core. |  |
|  | Population Care. 🡪 **Epidemiological Investigation.** | The system must provide the ability to enable epidemiological investigation. Epidemiological investigation is population-based and uses aggregated patient clinical information to identify health risks from the environment or population in accordance with legislation. Such information comes from cohorts, which are subpopulations defined in terms of, e.g. health status; diseases; injuries; demographics; education; social status; industry and occupation; etc. Population care surveillance and research analysis can use a broad range of information (inclusive of any type, or combination, of patient information) and can be gathered from multiple sources within a jurisdiction. Analysis of specified data for a cohort enables the organisation to monitor disease prevalence and health-related trends; evaluate behavioural, socio-economic, occupational, and other impacts on health; identify potential outbreaks and associated risk factors; and report de-identified data to public health (e.g. cases of influenza-like-illness by age range). This function can interact with and utilise capabilities of specialised external analytical systems. In addition to aggregate data, patient-level data can also be used. | Core. |  |
|  |  | The system’s epidemiological functions must be usable in all health and social work research studies. | Core. |  |
|  | Population Care. 🡪 Epidemiological Investigation. 🡪 **Data Collection.** | The system must provide the ability to enable data collection for the purpose of epidemiological investigation. Data collection creates data sets with selection criteria and parameters (queries). A query (e.g. Insulin study for males aged 65 and older) may be predefined or user-constructed and may identify static or dynamic cohorts. The information used by a query can be governed by policies and regulations. For example, an epidemiological investigation may require the exclusion of psychiatric data, or de-identification and aggregation of subjects. Query results are managed in order to be used for analysis. | Core. |  |
|  |  | The system must provide the ability to manage queries (e.g. criteria and parameters based on surveillance parameters, demographic, and/or clinical information) for use in extracting one or more cohorts, and/or aggregates according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to capture and maintain pre-defined criteria and parameters (e.g. based on demographic, and/or clinical information) for use in extracting one or more cohorts, and/or aggregates. | Core. |  |
|  |  | The system must provide the ability to capture and maintain ad hoc criteria and parameters specified by the user (e.g. based on demographic, and/or clinical information) for use in extracting one or more cohorts, and/or aggregates. | Core. |  |
|  |  | The system must provide the ability to capture and render the attributes (namely, the metadata) of a query (for example, query name, description, fields, values, and/or assumptions). | Core. |  |
|  |  | The system must provide the ability to maintain new cohort or cohorts. | Core. |  |
|  |  | The system must provide the ability to integrate previously-defined cohorts. | Core. |  |
|  |  | The system must provide the ability to integrate previously-defined aggregates within a cohort, and/or across cohorts and maintain the new aggregate or aggregates. | Core. |  |
|  |  | The system must provide the ability to manage data-visibility as a query component according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to render indicators (e.g. to investigators, caregivers or patients) regarding the queries in which a certain patient was included according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to manage ad hoc inquiries from public health organisations (e.g. requests for information related to demographic or clinical information) according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to manage case-reporting requirements defined by public health organisations as queries according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to capture, maintain, and render sets of questions that support disease outbreak investigations (e.g. disease-exposure questionnaires, disease-transmission contact tracing). | Core. |  |
|  | Population Care. 🡪 Epidemiological Investigation. 🡪 Data Collection. 🡪 **Psychological and social questionnaires and interviews.** | The system must provide the ability to manage psychological and social questionnaires and interviews. | Core. |  |
|  |  | The system must provide the ability to register create multiple questionnaires with multiple questionnaires for the same occupational group. | Core. |  |
|  |  | The system must have the ability to randomise the delivery of questions. | Core. |  |
|  |  | The system must provide the ability to do version control on questionnaires. | Core. |  |
|  |  | The system must provide the ability to design questionnaires depending on the expected projects and products including psychometric testing. | Core. |  |
|  |  | The system must provide the ability to link a questionnaire that must be used during the assessment, to an assessment. | Core. |  |
|  |  | The system must provide the ability to add categories to a questionnaire. | Core. |  |
|  |  | The system must provide the ability to capture questionnaire questions. | Core. |  |
|  |  | The system must provide the ability to capture multiple choice answers to questionnaire questions. | Core. |  |
|  |  | The system must provide the ability to capture detail information per question. | Core. |  |
|  |  | The system must provide the ability to link questions to a registered questionnaire and to categories within the questionnaire. | Core. |  |
|  |  | The system must provide the ability to capture a formula per questionnaire category. | Core. |  |
|  |  | The system must provide the ability to capture decision points (actions to be taken based on score ranges) per category within a questionnaire. | Core. |  |
|  |  | The system must provide the ability to capture category norms per questionnaire. (Norms are used to adjust scores in certain categories to cater for differences in perception between demographically distinct groups). | Core. |  |
|  |  | The system must provide the ability to link a questionnaire instance to a patient record. | Core. |  |
|  |  | The system must provide the ability to capture notes per questionnaire. | Core. |  |
|  |  | The system must provide the ability to replicate a questionnaire when a new questionnaire is registered and captured. | Core. |  |
|  |  | The system must provide the ability to render a questionnaire digitally to a patient or a group of patients for completion, and to record the patient’s responses. | Core. |  |
|  |  | The system must provide the ability to record medical surveillance interview results. | Core. |  |
|  |  | The system must provide the ability to combine personnel and medical health data for *inter alia* Operational research for the South African National Defence Force (SANDF) and other approved clients. (Current system: Statistical Package for Social Sciences (SPSS)). | Core. |  |
|  | Population Care. 🡪 Epidemiological Investigation. 🡪 **Data Analysis.** | The system must provide the ability to enable data analysis for the purpose of epidemiological investigation. Note that data analysis function must not only support epidemiological investigation.  Population-based analyses vary in approach which, for example, can be to:   1. evaluate care delivery, health status and disease trends, and identify potential, modifiable risk factors. 2. examine relationships between events and their outcomes. 3. focus on healthcare utilisation, service availability and quality of care.   Population-level surveillance, disease monitoring, and epidemiological research involves analysis of data (query results) based on existing relationships between pre-defined and well-known data elements such as, *inter alia*, demographics, social factors, family history of diseases, personal history, environmental factors, occupational factors, genomic data, problem lists, and other clinical information. Identification of new and previously unrecognised patterns of disease may require sophisticated pattern recognition analysis. | Core. |  |
|  |  | The system must provide the ability to manage query results (i.e. cohorts, and/or aggregates) according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to analyse various combinations of aggregates within a cohort (e.g. to determine the adequacy of patient confidentiality in the result). | Core. |  |
|  |  | The system must provide the ability to manage person-level information in a cohort or aggregate using user-identified, and/or pre-defined criteria (e.g. demographic or clinical information) according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to determine, tag and render changes in dynamic cohorts. | Core. |  |
|  |  | The system must provide the ability to analyse and render statistical information that has been derived from query results, including, but not limited to, person-level data and aggregates. | Core. |  |
|  |  | The system must provide the ability to analyse EHR data for clinical audit, for continuing professional education and for case-mix and resource management. | Core. |  |
|  |  | The system must support authorised analysis within an individual patient’s record and on a population of records. | Core. |  |
|  |  | The system must clearly specify if a dataset has been aggregated across a population or is about one patient. | Core. |  |
|  |  | DOD-specific: The system must provide the ability to determine social welfare profile for an intake per unit. | Core. |  |
|  |  | The system must enable predictive analytics and the use of artificial intelligence (AI). For example, using historical data to anticipate and prevent negative health outcomes using machine learning. | Core. |  |
|  |  | The system must have a capability to use available data to establish reward model to encourage participation in preventative care programmes. | Non-Core. |  |
|  |  | The system must have real-time business intelligence displays. For example, to monitor key HIV/AIDS metrics such as prevalence, treatment uptake and adherence rates. | Core. |  |
|  | Population Care. 🡪 Epidemiological Investigation. 🡪 Data Analysis. 🡪 **Psychological and social questionnaire and interview response.** | The system must provide the ability to analyse questionnaire and interview responses that were provided as part of health assessments. | Core. |  |
|  |  | The system must provide the ability to determine patient statuses through analysis of interview and questionnaire responses according to relevant business rules. | Core. |  |
|  |  | The system must provide the ability to analyse data to deliver mathematical statistical reports for interpretation. | Core. |  |
|  |  | The system must provide the ability to present analysis results as graphs. | Core. |  |
|  | Population Care. 🡪 Epidemiological Investigation. 🡪 **Data Sharing.** | The system must provide the ability to enable data sharing for the purpose of epidemiological investigation. Data sharing uses the information exchange function to share population care data (query results) within an organisation and with other organisations on an ad hoc or periodic basis. It can transmit individual and aggregate data in multiple formats (e.g. to external statistical analytic apps or to public health agencies to meet reporting requirements). Some or all members of a cohort or population can be anonymised according to data sharing rules. | Core. |  |
|  |  | The system must provide the ability to capture, maintain, and render a request for a population-based query result according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to capture, maintain, and render pre-defined report criteria (e.g. fields to be included in the resulting report or dataset), parameters, formats, and metadata that specify use, and/or reuse of the reported data according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law (e.g. the metadata may indicate that the report is intended for initial, confirmatory or other analyses). | Core. |  |
|  |  | The system must provide the ability to enter, maintain, and render ad hoc (user-specified) report criteria (e.g. the fields to be included in the resulting report or dataset), parameters, formats, and metadata that specify use, and/or reuse of the reported data according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law (e.g. the metadata may indicate that the report is intended for initial, confirmatory or other analyses). | Core. |  |
|  |  | The system must provide the ability to maintain and render the results of a query (e.g. person-level lists, case reports, or aggregates) as specified by the requestors’ report criteria using a recognised or a locally-defined standard (e.g. via reporting formats that are specified by public health guidelines). | Core. |  |
|  |  | The system must provide the ability to capture, maintain, and render with reports the metadata that specify use, and/or reuse of the reported data according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law (e.g. the metadata may indicate that the report is intended for preliminary, confirmatory or other analysis; or the metadata may also indicate that the data may only be used for surveillance purposes). | Core. |  |
|  |  | The system must provide the ability to render the results of a query in the form of a dataset that can be used by other program areas using analytical software (e.g. statistical software programs) according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to render the results of a query according to applicable privacy and confidentially rules (to prevent identification of individuals by unauthorised parties) according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to transmit information related to individual case reports, including clinical information (e.g. test results) from a care provider to public health organisations (e.g. public health notifiable, and/or reportable condition programs) according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law (e.g. a care provider notifies the local public health authority of an individual case of a sexually-transmitted disease that was identified during the analysis of a related query). | Core. |  |
|  |  | The system must provide the ability to capture, maintain, and render the request for a population-based query result using a recognised-standard, and/or locally-defined report format or metadata according to jurisdictional law. | Core. |  |
|  | Population Care. 🡪 **Risk and Alert Response.** | The system must enable risk alert and response. When a notice is received of a health risk within a cared-for population, this function alerts (notifies) individual care providers/managers regarding specific, potentially at-risk patients, suggesting a course of action. The provider/manager can now notify patients if necessary. When appropriate, this function notifies patients directly (as, for example, when a patient is due/overdue for a clinical follow-up or assessment of any kind). If, for example, a local outbreak of hepatitis A is detected, providers are advised of the at-risk population and potential prophylactic treatment. In another example, new care guidelines are disseminated for elderly patients with a specific chronic disease. Notifications use the communication function to send notifications to patients and providers. | Core. |  |
|  |  | The system must provide the ability to capture, maintain and render the identity of individual care providers or care managers within a cared-for population according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to render a response notification to the care providers or care managers within a cared-for population that a health risk notification was received. | Core. |  |
|  |  | The system must provide the ability to capture, maintain and render notification of a health risk within a cared-for population from public health authorities or other external authoritative sources. | Core. |  |
|  |  | The system must provide the ability to manage, in coordination with local, regional, state and national programs, dissemination of notifications of health risk to individual care providers or care-managers. | Core. |  |
|  |  | The system must provide the ability to transmit notifications to patients, directly or indirectly, who are described by the health risk alert. | Core. |  |
|  |  | The system must determine and present suggestions to the care provider indicating an appropriate course of action regarding a population health risk notification. | Core. |  |
|  |  | The system must provide the ability to render notifications/reports to public health authorities or other external authorities regarding health risks within a cared-for population according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  | Population Care. 🡪 **Risk Response Monitoring.** | The system must provide the ability to enable risk response monitoring. Risk response monitoring determines, after the event of a health risk alert (which is patient-specific), whether expected follow-up action was taken for affected patients in response to the alert. If required, it then executes follow-up notification. In other words, if a specific patient event has failed to occur (e.g. absence of an expected lab result), it communicates the omission to the appropriate care provider(s). | Core. |  |
|  |  | The system must determine and render to the provider specific recommended actions that may be taken at the patient level regarding a health risk alert. | Core. |  |
|  |  | The system must determine and render a notification to appropriate care providers of specific actions to be taken regarding the set of patients who are the target of a health risk alert. | Core. |  |
|  |  | The system must determine and render a list of those patients who have not received appropriate action in response to a health risk alert. | Core. |  |
|  |  | The system must provide the ability to determine and render a status report regarding the compliance of the set of all patients who are the target of a health risk alert. | Core. |  |
|  | Population Care. 🡪 **Donors Admin.** | The system should provide the ability to enable donors admin. Donors admin is the management of population-based information regarding potential human-product donors, and recipients. This demographic, clinical, and consent information concerns donors and actual donations and can be transmitted to other principals (internal and external donor matching agencies) in accordance with policy and legislation. | Non-core. |  |
|  |  | The system should provide the ability to manage the demographic, clinical and consent information that is needed for the population health-based human-product donation. | Non-core. |  |
|  |  | The system should provide the ability to capture demographic and clinical information about potential human-product donors. | Non-core. |  |
|  |  | The system should provide the ability to capture demographic, clinical and consent information about a human-product donation. | Non-core. |  |
|  |  | The system should transmit documented demographic and clinical information about potential human-product donors to other principals according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-core. |  |
|  |  | The system should transmit documented demographic, clinical and consent information about the human-product donation to other principals according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-core. |  |
|  | Population Care. 🡪 **Public Health Reporting.** | The system should provide the ability to enable public health reporting. Public health reporting reports to external entities, such as public health organisations, in compliance with public health reporting requirements and guidelines. In support of this function, formatted inbound communication can be received and validated to enable updates to the function’s public health reporting guidelines. | Non-core. |  |
|  |  | The system should provide the ability to capture and update public health reporting guidelines. | Non-core. |  |
|  |  | The system should provide the ability to render information that will promote the validation of the public health education material prior to update. | Non-core. |  |
|  | Population Care. 🡪 **Consistency of Care.** | The system should enable consistency of care management. Consistency of care ensures consistency of care between patient groups and populations. It aims to optimise care through consistency and context-sensitivity. Its approach is, first, to identify (to providers) groups of patients that share diagnoses, problems, functional limitations, treatment, medication, clinical observations, lab test results, and demographic characteristics that may impact care. Second, it assists providers with specific information for optimising the care of an individual from such a group. Such information, for example, may relate to the patient’s culture, religion, socio-economics, living situation, and functional limitations; eligibility for a specific test, therapy, or follow-up; access to supportive resources, etc. This function can help to initiate a follow-up or recall for selected patients and enable configurable reports for specific areas of interest (e.g. chronic conditions, suicidal risk, post-traumatic stress syndrome, traumatic brain injury, etc). | Non-core. |  |
|  |  | The system should provide the ability to identify patients that are eligible for healthcare management protocols based on criteria identified within the protocol. | Non-core. |  |
|  |  | The system should provide the ability to include or exclude a patient from an existing healthcare management protocol group. | Non-core. |  |
|  |  | The system should provide the ability to capture, maintain and render the reason for inclusion or exclusion from a protocol or protocol group. | Non-core. |  |
|  |  | The system should provide the ability to audit compliance of selected populations and groups that are the subjects of healthcare management protocols. | Non-core. |  |
|  |  | The system should provide the ability to determine and present groups of patients based on similar attributes, as can be found in clinical observations or laboratory test results. | Non-core. |  |
|  |  | The system should capture, maintain, and render the information necessary for patient follow-ups or recalls. | Non-core. |  |
|  |  | The system should capture, maintain, and render protocols and guidelines for follow-ups or recalls. | Non-core. |  |
|  |  | The system should determine and present notifications to initiate follow-ups or recalls based on protocols and guidelines. | Non-core. |  |
|  |  | The system should capture research protocol deviation information, including any verbatim text of protocol deviation. | Non-core. |  |
|  | Population Care. 🡪 **Health Study Identifiers.** | The system should provide the ability to manage health study identifiers. Health study identifiers identify key elements of a research or population care study.  Research/population studies are distinguished from each other with identifiers for key elements. Study key elements may include identifying the study, location of the study, patient subject of study, and investigator. Identifiers are managed through their lifecycle, including capture, maintenance and rendering. | Non-core. |  |
|  |  | The system should provide the ability to manage unique research identifiers (i.e. sponsor-provided Protocol mnemonic) such that the research study can be identified. | Non-core. |  |
|  |  | The system should provide the ability to manage the site identification number(s) as assigned by the Sponsor. | Non-core. |  |
|  |  | The system should provide the ability to manage unique research subject identifiers (e.g. these identifiers could be used as a screening number prior to the subject qualifying for the clinical trial). Note: A given patient may have multiple research subject identifiers if the patient has been on multiple research studies. | Non-core. |  |
|  |  | The system should provide the ability to manage clinical research identifiers (e.g. investigator identifier or visit name) as distinct data elements. | Non-core. |  |
|  | Population Care. 🡪 **De-identification.** | The system must enable de-identification. De-identification provides patient information in which patients are de-identified. A user can comply with a request (internal or external) for patient information by exporting the information in accordance with de-identification requirements (which might vary according to locale, realm, entitlement of the requestor [by law or by custom], etc). The system maintains an auditable record to enable a review of the who, what, why and when of a request and export. A random re-identification key may be added for re-identifying a patient if he/she is discovered, for example, to be medically at risk for any reason. Refer to de-identification requirement description. | Core. |  |
|  | Population Care. 🡪 **Healthcare Programs.** | The system must provide the ability to manage healthcare program, projects and sub-project activities. The system must provide the ability to manage the hierarchy of healthcare programs that consist of projects, and projects that consist of sub-projects. | Core. |  |
|  |  | The system must provide the ability to register healthcare programs such as social work projects, clinical trials, wellness programs etc. | Core. |  |
|  |  | The system must provide the ability to record healthcare program metadata, including the responsible provider, community targeted, dates, purpose, expected outcome. and other codified and non-codified variables per programme according to RSA industry standards. | Core. |  |
|  |  | The system should provide the ability to interface with a project management tool where detailed activities are planned and monitored. | Non-core. |  |
|  |  | The system must allow for the capturing of notes related to projects  The system must provide for project related document templates such as consent forms, that can be electronically signed by participants. | Core |  |
|  |  | The system must allow for the registration of sub-projects to a project, and projects to a programme. | Core |  |
|  |  | The system must provide for storing of documents, in various file formats, related to projects | Core |  |
|  |  | The system should provide for the capturing of healthcare programmes, projects and sub projects. | Non-Core |  |
|  |  | The system must provide for service recipients (patients) within a project to communicate with the project leader/owner | Core. |  |
|  |  | The system should provide the ability to receive progress information from a project management tool to update the status of the healthcare program. | Non-core. |  |
|  |  | The system must provide the ability to link members of the targeted community to the healthcare program. | Core. |  |
|  |  | The system should allow for a manager to allocate a provider as resource to a particular project or programme and be notified accordingly. | Non-Core. |  |
|  |  | The system should allow for categorisation of documents linked to a project, for example, process notes, reports, minutes, attendance registers. | Core. |  |
|  |  | The system should provide for the generation of project management reports based on variables such as project type, region, unit, project status. | Non-Core. |  |
|  |  | The system must provide the ability to record actual outcome of the healthcare program and to compare it with the planned outcome of the healthcare program. | Core. |  |
|  |  | The system must provide the ability to create multiple assessments with multiple questionnaires for the same occupational group. | Core. |  |
|  |  | The system must have the ability to randomise the delivery of questions. | Core. |  |
|  |  | The system must provide the ability to do version control on questionnaires. | Core. |  |
|  |  | The system must provide the ability to design questionnaires depending on the expected projects and products including psychometric testing. | Core. |  |
|  |  | The system must provide the ability to link a questionnaire that must be used during the assessment, to an assessment. | Core. |  |
|  |  | The system must provide the ability to add categories to a questionnaire. | Core. |  |
|  |  | The system must provide the ability to capture questionnaire questions. | Core. |  |
|  |  | The system must provide the ability to capture multiple choice answers to questionnaire questions. | Core. |  |
|  |  | The system must provide the ability to capture detail information per question. | Core. |  |
|  |  | The system must provide the ability to link questions to a registered questionnaire and to categories within the questionnaire. | Core. |  |
|  |  | The system must provide the ability to capture a formula per questionnaire category. | Core. |  |
|  |  | The system must provide the ability to capture decision points (actions to be taken based on score ranges) per category within a questionnaire. | Core. |  |
|  |  | The system must provide the ability to capture category norms per questionnaire. (Norms are used to adjust scores in certain categories to cater for differences in perception between demographically distinct groups). | Core. |  |
|  |  | The system must provide the ability to link a questionnaire instance to a patient record. | Core. |  |
|  |  | The system must provide the ability to capture notes per questionnaire. | Core. |  |
|  |  | The system must provide the ability to replicate a questionnaire when a new questionnaire is registered and captured. | Core. |  |
|  |  | The system must provide the ability to render a questionnaire digitally to a patient or a group of patients for completion, and to record the patient’s responses. | Core. |  |
|  |  | The system must provide the ability to record healthcare surveillance interview results. | Core. |  |
|  |  | The system must provide the ability to combine personnel and health data for *inter alia* operational research for the SANDF and other approved clients. | Core. |  |

## Care support requirements

Care Support requirements are expressed in Table 9 below, per functions as listed below.

1. Decision support
   1. Knowledge base
      1. Clinical knowledge
      2. Clinical rules and protocols
      3. Business rules
   2. Inference engine
   3. Decision support communication
   4. Function
   5. CDS compliance tracking
   6. Patient education
2. Workflow management
   1. Workflow process definition
   2. Workflow enactment
   3. Workflow client
   4. Workflow admin and control
   5. Workflow interfaces
3. Information exchange
   1. Internally sourced information
      1. Evidence of record entry extract event
      2. Disclosed health record
      3. Label printing
      4. Information view
      5. Presentation filters
      6. Standard report generation
      7. Ad hoc queries and reports
      8. Registry information exchange
      9. Summary record of care
      10. Health services reports
      11. Geospatial reporting
   2. Externally sourced information
   3. Remote care information
   4. Equipment care information.
4. Communication functions
   1. Bidirectional communication
      1. Inter-provider communication
      2. Provider-professional communication
      3. Administrative communication
      4. Provider-patient communication
      5. Administrator-patient communication
      6. Provider-employer communication
      7. General communication
   2. Unidirectional communication
      1. Function generated messages
         1. Decision support messages
         2. Resource scheduling messages
         3. Order tracking messages
      2. User-initiated messages
         1. Employee messages
         2. Patient messages
   3. Message structuring
   4. eMail ticketing
5. Business intelligence
6. Personal health record system (PHR-S)
   1. PHR-S registration
   2. PHR-S admin information
   3. PHR-S clinical information
   4. PHR-S EHR annotation
   5. PHR-S education
   6. PHR-S remote patient monitoring (RPM) activation
   7. PHR-S appointment
   8. PHR-S communication
   9. PHR-S patient feedback
   10. PHR-S patient-reported outcomes
7. Remote care
   1. Telehealth
   2. RPM
   3. Remote care information [remote care]
8. Security functions
   1. Access control
      1. Authentication
      2. Authorisation
      3. Emergency access control
      4. Patient access
   2. Non-repudiation.
   3. Signatures.
9. Privacy
   1. Data masking
   2. Identity redaction
   3. Identity protection
   4. De-identification
      1. Evidence of record entry de-identification event
      2. Evidence of record entry de-identification (pseudonymisation) event
      3. Re-identify record entry
         1. Evidence of record entry re-identification event
   5. Privacy consent directive
10. Terminology
    1. Standard terminologies
    2. Terminology model
    3. Terminology versioning
    4. Terminology mapping
11. Audit
    1. Audit triggers
       1. Clinical audit triggers
       2. Security audit triggers
       3. Record entry audit triggers
       4. System audit triggers
    2. Audit log
    3. Audit review and notification
    4. Audit trail
12. Record lifecycle and lifespan
    1. Record lifecycle
       1. Originate and retain record entry
          1. Evidence of record entry originate/retain event
       2. Amend record entry content
          1. Evidence of record entry amendment event
       3. Translate record entry content
          1. Evidence of record entry translate event
       4. Attest record entry content
          1. Evidence of record entry attestation event
       5. View/access record entry content
          1. Evidence of record entry view/access event
       6. Output/report record entry content
          1. Evidence of record entry output/report event
       7. Disclose record entry content
          1. Evidence of record entry disclosure event
       8. Transmit record entry content
          1. Evidence of record entry transmit event
       9. Receive and retain record entries
          1. Evidence of record entry receive/retain event
       10. Archive record entries
           1. Evidence of record entry archive event
       11. Restore record entries that were previously archived
           1. Evidence of record entry restore event
       12. Destroy or identify record entries as missing
           1. Evidence of record entry destruction event
       13. Deprecate/retract record entries
           1. Evidence of record entry deprecation/retraction event
       14. Re-activate record entries
           1. Evidence of record entry re-activation event
       15. Merge record entries
           1. Evidence of record entry merge event
       16. Unmerge record entries
           1. Evidence of record entry unmerge event
       17. Link record entries
           1. Evidence of record entry link event
       18. Unlink record entries
           1. Evidence of record entry unlink event
       19. Place record entries on legal hold
           1. Evidence of record entry legal hold event
       20. Release record entry from legal hold
           1. Evidence of record entry legal hold release event
    2. Record lifespan
       1. Manage record entries
       2. Manage record entries for legal hold
    3. Record states
       1. Manage record pending state
       2. Manage record entry amended, corrected and augmented state
       3. Manage record entry succession and version control
       4. Manage record entry retraction
    4. Record completeness
13. Record entry data values requirements are:
    1. Textual data values
    2. Term data values
    3. Quantity and numeric data values
    4. Time data values
    5. Boolean data values
    6. Graphical and multimedia data values
    7. Externally referenced data values
14. Manage user help.
15. External provider portal.
16. Medico-legal admin.

Column a of Table 9 reflects function names. The function for which descriptions and requirements are provided in column b, are typed in bold font. Functional hierarchy that provides context for the function in bold is indicated using arrows.

Column b of Table 9 contains the description and requirements relevant to the function stated in bold in column a.

Column c of Table 9 is used to indicate if a requirement is considered as a core or non-core requirement. A requirement is classified as core when it must be satisfied by the eHealth system. Non-core requirements are considered as ‘nice-to-have’ requirements.

The bidder must indicate in Column d of Table 9, for each requirement, as indicated in the table below. Bidders are encouraged to provide additional information as comment per requirement (column d of Table 9).

Table 8 – Response legend (Care Support)

| **Response indicator** | **Definition** |
| --- | --- |
| Y | The functionality exists in the proposed system (no development is required) |
| YC | The proposed system must be customised with minor development to meet the requirement |
| YD | The functionality does not exist and must be developed to meet the requirement |
| N | The functionality does not exist in the proposed system and cannot be developed |

**NOTE:** Where “according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law” is stated as part of a requirement it means that the system must be configurable to accommodate different rules and processes over time, based on RSA industry standards, SAMHS scope of practice, SAMHS organisational policy and/or jurisdictional law.

Table 9 – Care support requirements

| **No** | **Function** | **Description and Requirements** | **Core**  **Non-Core** | **Bidder response & comment:**  **Y = Yes exist**  **YC = Customise, Minor development**  **YD = Can be developed**  **N = Not available** |
| --- | --- | --- | --- | --- |
| **a** | **b** | **c** | **d** |
|  | Care Support 🡪 **Decision Support.** | The system must enable decision support. The decision support function includes CDS and Business Decision Support (BDS):   1. CDS primarily gives real-time, interactive, knowledge-based assistance to a provider in the context of patient care provision of individual patients. It also gives non-interactive, knowledge-based assistance in the context of population care, where patient populations (groupings) are concerned. CDS is provided mostly in the form of interactive prompts and non-interactive messages (alerts, reminders, and notifications). 2. BDS enables all role-players to comply with operational and administrative (non-clinical) requirements of the organisation. BDS is provided mostly in the form of rules enforcement (in conjunction with interactive prompts). | Core. |  |
|  | Care Support 🡪 Decision Support. 🡪 **Knowledge Base.** | The system must provide a knowledge base. The knowledge base must contain clinical knowledge, clinical rules & protocols and business rules.  Rules enable decision logic to be externalised from application code, enabling users to change rules without the need for IT intervention.  The knowledge base is maintained/updated by expert users on an ongoing basis, which is particularly applicable to clinical knowledge and clinical rules & protocols. These users verify, and obtain approval for changes to decision support rules before update. Rules are version-controlled.  The knowledge base can incorporate links to, and the capture/import of, information provided by trusted external healthcare organisations regarding clinical practice guidelines (CPGs). | Core. |  |
|  |  | The system must import recognised-standard, and/or locally-defined standard -based guidance, such as clinical practice guidelines. | Core. |  |
|  |  | The system must provide the ability to expert users to maintain and update the clinical content or rules utilised to generate CDS reminders and alerts. | Core. |  |
|  |  | The system must provide the ability to render information that will allow validation that the most applicable version (of the decision support rules) is utilised for the update. | Core. |  |
|  |  | The system must capture the date of update of the decision support rules. | Core. |  |
|  |  | The system must provide the ability to maintain site-specific modifications to standard care plans, guidelines, protocols, and clinical pathways obtained from outside sources. | Core. |  |
|  |  | The system must determine variances from standard care plans, guidelines, protocols, and clinical pathways and provide the ability to capture, maintain and render appropriate alerts, notifications and reports. | Core. |  |
|  |  | The system must determine variances from standard care plans, guidelines and protocols for reportable conditions and provide the ability to capture, maintain and transmit related information to public health. | Core. |  |
|  |  | The system must provide the ability to capture, maintain and render condition-specific guidelines (e.g. based on age or weight). | Core. |  |
|  |  | The system must provide the ability to capture documents using standards-based documentation templates to support data exchanges. | Core. |  |
|  |  | The system must provide the ability to capture, maintain, and render specialised medical treatment guidelines and protocols for unique physical, chemical, biological, and radiologic exposures. | Core. |  |
|  |  | The system must provide the ability to manage biometric data, such as age-specific, weight-specific or height-specific normative data, to identify, track and provide alerts, notifications and reports about variances, care plans, guidelines and protocols. | Core. |  |
|  |  | The system must provide the ability to render external evidence-based healthcare recommendations, including documentation of sources. | Core. |  |
|  |  | The system must provide the ability to render external evidence-based documentation appropriate for the care provider to render a timely judgement. | Core. |  |
|  | Care Support 🡪 Decision Support. 🡪 Knowledge Base. 🡪 **Clinical Knowledge.** | The system must provide the ability to render and maintain clinical knowledge. Clinical knowledge, which is electronically documented and consists of clinical guidelines, protocols, care pathways, documentation templates, order sets, etc. Such content is available to users – either directly or via relevant care-related functions. Clinical knowledge can potentially be stored in multiple repositories. | Core. |  |
|  |  | The system must have a quick search function for easy retrieval of documents and policies. | Core. |  |
|  | Care Support 🡪 Decision Support. 🡪 Knowledge Base. 🡪 **Clinical Rules & Protocols.** | The system must provide the ability to render, apply and maintain clinical rules & protocols. Clinical rules & protocols represent clinical knowledge mainly in the form of machine-readable, conditional (If-Then-Else) rules. For example, to determine drug interactions, a rule might state that IF drug X is taken AND drug Y is taken THEN alert user. Clinical rules & protocols apply to the clinical aspects of healthcare in the organisation and are used mostly to generate messages in functions. | Core. |  |
|  |  | The system must support smart RSA industry standard coding. When diagnosis is captured, the system must render a list of related relevant codes for the provider to select the appropriate code. | Core. |  |
|  |  | The system must support smart RSA industry standard coding. When diagnosis is captured, the system must render a list of related RSA industry standard codes for the provider to select the appropriate code. | Core |  |
|  | Care Support 🡪 Decision Support. 🡪 Knowledge Base. 🡪 **Business Rules.** | The system must provide the ability to render, apply and maintain business rules. Business rules are similar to clinical rules & protocols in that they represent knowledge in the form of machine-readable rules. Business rules apply to operational and administrative aspects of the organisation and are used mostly to determine actions in functions and workflow and for input validation. | Core. |  |
|  |  | The system must provide the ability to render and manage business rules. | Core. |  |
|  |  | The system must provide the ability to enter, import, or receive business rules to guide system behaviour. | Core. |  |
|  |  | The system must provide the ability to maintain business rules and their components. | Core. |  |
|  |  | The system must provide the ability to tag decision support rules as inactive/obsolete or to remove them according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to manage diagnostic decision support rules that guide system behaviour according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to manage workflow control rules that guide system behaviour according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to manage access privilege rules that guide system behaviour according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to manage other rules (for example, monitoring rules, user defaults rules and preferences rule) that guide system behaviour according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to determine system behaviour based upon defined business rules. | Core. |  |
|  | Care Support 🡪 Decision Support. 🡪 **Inference Engine.** | The system must provide inference engine functionality. This component is at the heart of decision support. It executes the logic of the aforesaid machine-readable rules in conjunction with user input and the patient’s EHR (to provide patient-specific context). In the case of clinical rules & protocols, it uses clinical EHR information, and for business rules, it uses mostly administrative EHR information. A key part of this process is to determine the actions required, based on the patient's circumstances. The results of the process (required actions, recommendations, alerts, etc) are then sent to the user. | Core. |  |
|  | Care Support 🡪 Decision Support. 🡪 **Decision Support Communication.** | The system must enable decision support communication. This mechanism handles communication between the inference engine and the user (represented by a function). Examples of user inputs include clinical data entry, and selection of a proposed drug, order set, or treatment regime. Examples of outputs (which are determined by the inference engine) include CDS interventions such as alerts, guidelines, diagnostic refinements, templates, and smart forms, which are typically delivered to the user interface of the function. | Core. |  |
|  |  | The system must support the derivation of alert and trigger conditions from health record information. For example, where a record exists for a deceased patient, the system must alert the user when accessing/amend/update the patient profile. | Core. |  |
|  |  | The system must be able to represent or reference the use of decision support services or knowledge services for activities recorded within particular health record entries. | Core. |  |
|  | Care Support 🡪 Decision Support. 🡪 **Function.** | The system must provide the ability to obtain and communicate clinical decisions and business rules relevant to event-specific information. A function invokes the inference engine via the decision support communication mechanism when it encounters an event (trigger) that requires either a clinical decision or conformance to a business rule. The function also passes patient-specific information about the care scenario to the inference engine via the communication mechanism. The inference engine then generates a result. When an interactive function (user-driven function) receives this result from the inference engine (via the communication mechanism), it displays the result (a decision support prompt) on its user interface in real-time. In contrast, a non-interactive function will send the result for example as an over-the-top (OTT), unidirectional decision support message (notification, alert, or reminder) to one or more individuals in the form of, e.g. a structured email, SMS, or IM. A decision support prompt requires an interactive user response, whereas a decision support message cannot be interactively responded to. | Core. |  |
|  | Care Support 🡪 Decision Support. 🡪 **CDS Compliance Tracking.** | The system must provide the ability to manage CDS compliance tracking. CDS compliance tracking records provider responses to prompts from decision support in terms of whether a prompt was accepted or overridden. This information is usable at both patient level and aggregate level (for patient populations, research protocols, organisational trending, etc). | Core. |  |
|  |  | The system must provide the ability to capture that CDS prompts (including user warnings, alerts and reminders) have been rendered and user response to accept or override those prompts. | Core. |  |
|  |  | The system must provide the ability to capture the reason for variation from the decision support prompt. | Core. |  |
|  |  | The system must provide the ability to render recorded variances from decision support prompts. | Core. |  |
|  |  | The system must provide the ability to render a notification to users that a decision support alert has been disabled (e.g. notification to administrators or the user who disabled the alert). | Core. |  |
|  |  | The system must provide the ability to render a notification to users when a protocol is outdated. | Core. |  |
|  | Care Support 🡪 Decision Support. 🡪 **Patient Education.** | The system must provide the ability to manage patient education. Patient education provides patients with access to information (from internal sources and/or via links to external sources) about wellness, disease management, treatments, peer support groups, public health education materials, privacy etc. It includes decision support for self-care/management of specific conditions (between encounters), which may include schedules for home monitoring, lab tests, clinical check-ups, medication-related guidance or reminders, post-procedure instructions, oral hygiene instructions, etc. Individuals can research health questions, follow up from clinical visits, identify treatment options, etc. Patient education is available to a patient either via his/her PHR-S or via provider-patient communication. Updates to patient education material are regularly received (manually or electronically) and incorporated in the clinical knowledge component of the knowledge base. | Core. |  |
|  |  | The system must provide the ability to determine and render information about wellness, disease management, treatments, population level health measures and related information that is relevant for a specific patient. | Core. |  |
|  |  | The system must provide the ability to determine and render information related to a health question directly from data in the health record or other means such as key word search. | Core. |  |
|  |  | The system must provide the ability to capture and render patient educational information from external sources. | Core. |  |
|  |  | The system must provide the ability to link to external-based wellness, disease management, peer support group and related information. | Core. |  |
|  |  | The system must provide the ability to capture and update education material that may be provided to the patient at the PoC. | Core. |  |
|  |  | The system should provide the ability to render information that will allow validation of the patient education material prior to update. | Non-Core. |  |
|  | Care Support 🡪 **Workflow Management.** | The system must provide the ability to manage workflow. In brief, workflow is the computerised automation of a business process (in whole or in part) in which tasks, documents, and information are passed between participants according to a defined set of rules. Workflow management procedurally automates a business process by managing the sequence of work activities and invoking the required human and IT resources associated with the activities. | Core. |  |
|  |  | The system must provide the ability to manage workflow business rules including work queues, personnel lists, and system interfaces. | Core. |  |
|  |  | The system must provide the ability to determine workflow assignments based on workflow-related business rules. | Core. |  |
|  |  | The system must provide the ability to manage human resources (i.e. personnel lists) for workflow queues. | Core. |  |
|  |  | The system must exchange information with external systems (for example, DOD Human Resources system) to support the management of human resources. | Core. |  |
|  |  | The system must exchange information with external systems (for example, DOD Human Resources system) to support the management of workflow queues (task lists). | Core. |  |
|  |  | The system must provide the ability to exchange workflow related information with an external system. | Core. |  |
|  |  | The system must provide the ability to render notifications and tasks based on system triggers. | Core. |  |
|  |  | The system must determine and render an updated priority of tasks on the workflow (task list) queue in accordance with business rules, and according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must determine and render an update to the tasks, and/or execution path on the workflow (task list) queue in accordance with business rules, and according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must determine and render an update to the assignment of the resources to workflow (task list) queue in accordance with business rules, and according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to render a notification of a workflow update including the details of the update. | Core. |  |
|  |  | The system must provide the ability to transmit a workflow (task list) queue update request to an external system. | Core. |  |
|  |  | The system must provide the ability to receive a workflow (task list) queue update response from an external system. | Core. |  |
|  | Care Support 🡪 Workflow Management. 🡪 **Workflow Process Definition.** | The system must provide the ability to manage workflow process definitions. The term workflow process definition here includes the following.   1. Process definition tool. This tool is a build-time function and is used to define (and possibly model) workflow processes, which are referred to as process definitions. 2. Process definition. A process definition is a computer-processable definition of a business process. That is, it contains the information required by the workflow enactment software to execute the process. It normally consists of distinct activity steps, with associated computer and/or human operations and rules that govern the progression of the process. It can sometimes be altered dynamically (during run-time). | Core. |  |
|  |  | A process definition must reference organisational structure and role information rather than specific participants. This enables the process definition to be specified in terms of organisational entities and role functions associated with particular activities or information objects. Workflow enactment can then link organisational entities or roles to specific participants in the workflow at run-time. | Core. |  |
|  |  | The system must provide the ability to support documentation and progression of clinical processes. | Core. |  |
|  |  | The system must support integrated care processes, including collaborative multi-disciplinary care and case management across different healthcare sectors and settings (e.g. emergency care, primary care, acute hospitals, allied health, home-based care and military field settings. | Core. |  |
|  | Care Support 🡪 Workflow Management. 🡪 **Workflow Enactment.** | The system must provide workflow enactment functionality. Workflow enactment is the run-time function that controls/manages workflow processes in an operational environment. It consists of one or more workflow engine(s), which interprets and executes the process definition. | Core. |  |
|  | Care Support 🡪 Workflow Management. 🡪 **Workflow Client.** | The system must provide the ability to manage worklists of users. The term workflow client here includes the following:   1. Worklists. Where user interactions are required in a process, the workflow engine places items on worklists for attention by the workflow client, which manages interactions with the workflow participants (users). A worklist can be maintained by the workflow software and/or by the user. 2. Workflow client. A workflow client (also known as a worklist handler) is a run-time function that manages (via the worklist) interaction between workflow participants and workflow enactment. It progresses work requiring user attention. It may control work allocation between a set of users using facilities such as load balancing and work reassignment. It may need to invoke local applications to support the user in certain tasks. | Core. |  |
|  | Care Support 🡪 Workflow Management. 🡪 **Workflow Admin and Control.** | The system must provide the ability to manage workflow admin and control. This function consists of supervisory functions, which must enable supervisors to:   1. alter work allocation rules. 2. identify participants for specific organisational roles in a process. 3. track alerts for missed deadlines or other events. 4. trace the history of a process instance. 5. enquire about work throughput or other statistics, etc. 6. track clinical task status to monitor tasks’ timeliness and completion so as to limit the risk of error in the care process: it must indicate the status of any task (e.g. unassigned, on hold, started, performed, cancelled, denied, resolved, etc) and generate reports according to the requirements of policy, legislation and accreditation.   When distributed workflow engines are used, specific commands may be required to transfer such control operations between different workflow engines in order to provide a single administrative interface. | Core. |  |
|  |  | The system must provide the ability to capture new tasks. | Core. |  |
|  |  | The system must provide the ability to auto-populate task information based on rules, patient information, triggering events, and/or resource factors. | Core. |  |
|  |  | The system must provide the ability for the user to enter and update an assignment for a task to one or more individuals or roles. | Core. |  |
|  |  | The system must provide the ability to capture oral (e.g. telephone, voice-over-IP or in-person) communication between providers and patients or their representatives (including the identification of the providers). | Core. |  |
|  |  | The system must provide the ability to determine and update an assignment for a task to one or more individuals or clinical roles, based on workflow rules. | Core. |  |
|  |  | The system must provide the ability to determine workflow task routing to individuals or roles in succession or in parallel. | Core. |  |
|  |  | The system must provide the ability to determine workflow task routing to multiple individuals or roles in succession or in parallel based on status and workflow rules. | Core. |  |
|  |  | The system must provide the ability to capture and update priorities for tasks. | Core. |  |
|  |  | The system must provide the ability to determine and update priorities for tasks (e.g. based on urgency assigned to the task, clinical rules & protocols and business rules). | Core. |  |
|  |  | The system must provide the ability to capture restrictions for task assignment based on an appropriate role according to organisational policy. | Core. |  |
|  |  | The system must determine restrictions for task assignment based on appropriate role according to organisational policy. | Core. |  |
|  |  | The system must provide the ability to update the priorities of clinical tasks (e.g. to ensure timely completion). | Core. |  |
|  |  | The system must determine and update the priorities of clinical tasks according to organisational policy (e.g. to ensure timely completion). | Core. |  |
|  |  | The system must provide the ability to render a list of tasks by user or user role according to user specified criteria. | Core. |  |
|  |  | The system must provide the ability to determine time periods and recipients for notification of overdue medication administrations. | Core. |  |
|  |  | The system must provide the ability to render a notification to the clinician of overdue medication administrations. | Core. |  |
|  |  | The system must provide the ability to determine time periods for order expiration for types of orders. | Core. |  |
|  |  | The system must provide the ability to render a notification to the ordering clinician concerning orders due to expire. | Core. |  |
|  |  | The system must provide the ability to render a notification to the ordering clinician concerning orders requiring signature (e.g. verbal and telephone orders, co-signature). | Core. |  |
|  |  | The system must provide the ability to enter and maintain the clinical task assignments and pre-conditions expected for performance of identified/selected health care procedures according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to reassign a single task or group of tasks to available roles when primary role selected is not available. | Core. |  |
|  |  | The system must provide the ability to transmit a notification to a patient's provider or to the patient's care team in cases where a determination has been made that applicable tasks and pre-conditions expected have not been performed. This must be done according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to link a clinical task to the component of the EHR system required to complete the task. | Core. |  |
|  |  | The system must provide the ability to capture, maintain and render the life-cycle status of a healthcare activity (linked to a patient’s EHR), which might be specified as a value from a standardised term list or terminology system (e.g. to indicate if an activity is intended or scheduled or performed or cancelled). | Core. |  |
|  |  | The system must automatically present the component of the system required to complete a clinical task. | Core. |  |
|  |  | The system must provide the ability to link a non-clinical task to a clinical task. | Core. |  |
|  |  | The system must provide the ability to link a clinical task to a patient. | Core. |  |
|  |  | The system must provide the ability to update the status of tasks. | Core. |  |
|  |  | The system must provide the ability to determine and update the status of tasks based on workflow and clinical rules & protocols and according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to render notices of the status of tasks to providers. | Core. |  |
|  |  | The system must provide the ability to capture subscription preferences for notices of changes in the status of tasks. | Core. |  |
|  |  | The system must provide the ability to determine the order of clinical tasks based on status. | Core. |  |
|  |  | The system must provide the ability to present current clinical tasks as work lists. | Core. |  |
|  |  | The system must provide the ability to present current dental/orthopaedic laboratory tasks and work lists. | Core. |  |
|  |  | The system must provide the ability to enter configuration parameters for filtering and rendering of clinical task lists. | Core. |  |
|  |  | The system must provide the ability to enter configuration parameters for filtering and rendering of dental/orthopaedic laboratory task lists. | Core. |  |
|  |  | The system must provide the ability to render clinical task lists based on configuration entered by the user. | Core. |  |
|  |  | The system must provide the ability to render dental/orthopaedic laboratory task lists based on configuration entered by the user. | Core. |  |
|  |  | The system must render a notification to the tasking or requesting provider when clinical tasks are complete. | Core. |  |
|  |  | The system must render a notification to the tasking or requesting provider when dental/orthopaedic laboratory tasks are complete. | Core. |  |
|  |  | The system must provide the ability to enter time limits on particular tasks that have a deadline or require follow-up. (including dental/orthopaedic laboratory tasks). | Core. |  |
|  |  | The system must provide the ability to determine when time limits for particular tasks are exceeded. | Core. |  |
|  |  | The system must provide the ability to render a list of tasks that exceed their time limits. | Core. |  |
|  |  | The system must render a list of tasks that have not been completed at any time including the time of patient disposition. | Core. |  |
|  |  | The system must provide the ability to update task status (e.g. unassigned, on hold, started, performed, cancelled, denied, and resolved). | Core. |  |
|  |  | The system must determine and update the status of tasks based on workflow rules. | Core. |  |
|  |  | The system must support the representation, tracking, monitoring and retrieval of health information that relates to a particular health issue or care plan. | Core. |  |
|  |  | The system must be able to represent partial completion of a clinical process. | Core. |  |
|  |  | The system must support the continuity of a clinical process, the ability to query the status of a process, modify an existing process, and verify that a process has been completed. | Core. |  |
|  |  | The system must provide the ability to manage customised job cards. Job cards that are currently identified are for orthotics and dental/orthopaedic laboratories. | Core. |  |
|  | Care Support 🡪 Workflow Management. 🡪 **Workflow Interfaces.** | The workflow component of the system must be interoperable with workflow components of other products from different vendors. All workflow products do provide exposed interfaces between their individual functional components. Some workflow products bundle multiple functional components into a single entity, with embedded interfaces that are unavailable to third party products. To enable interoperability between components from different vendors, at least the major interfaces must be available, i.e. interfaces between workflow enactment service and process definition tools, administration and monitoring tools, workflow client applications, invoked applications and other workflow enactment services. | Core. |  |
|  |  | The system must provide the ability to transmit task assignment with request for confirmation to external systems that participate in completion of the task (e.g. task requesting patient transportation or request for meeting between providers). | Core. |  |
|  | Care Support 🡪 **Information Exchange.** | The system must provide the ability to manage information exchange. Information exchange applies to information that is sourced either internally or externally. | Core. |  |
|  | Care Support 🡪 Information Exchange. 🡪 **Internally Sourced Information.** | The system must provide the ability to exchange internally sourced information. Information exchange, in conjunction with bidirectional communication, enables participants (providers) in patient-centred care to communicate relevant clinical information, enabling the coordination of a patient’s care. All exchanges must conform to policy, legislation and privacy requirements; therefore, the system must be configurable to enforce relevant rules applicable per time period. | Core. |  |
|  |  | The system must provide the ability to initiate an audit trigger to track record entry content extraction. | Core. |  |
|  |  | The system must support data extraction operations across the complete dataset that constitutes the health record of an individual and provide an output that fully chronicles the healthcare process. | Core. |  |
|  |  | The system must provide the ability to extract and present a full chronicle of the healthcare process from assembled record entries. | Core. |  |
|  |  | The system must provide the ability to extract and present a full chronicle of healthcare delivered to a patient from assembled record entries. | Core. |  |
|  |  | The system must provide the ability to extract record entry content to produce subsets, derivations, summaries or aggregations according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to de-identify record entries during extraction. | Core. |  |
|  |  | The system must provide the ability to de-identify record entry content prior to output/reporting. | Core. |  |
|  |  | The system must provide the ability to extract record entry content based on queries with selection criteria, for example, key words, date/time range, full text search. This is applicable to any record, and not just to patient records, e.g. providers, facilities, disasters, healthcare programs, healthcare projects, audit logs etc. | Core. |  |
|  |  | The system must provide the ability to extract metadata associated with record entry content. | Core. |  |
|  |  | The system must provide the ability to extract information across the complete dataset that constitutes all record entries for a patient by applying selection criteria. | Core. |  |
|  |  | The system must provide the ability to extract record entry content for various purposes, including administrative, financial, research, quality analysis and public health. | Core. |  |
|  |  | The system must provide the ability to manage a set of over-riding parameters to exclude sensitive or privileged record entry content from extraction. | Core. |  |
|  |  | The system must provide the ability to extract unstructured record entry content and convert it into structured data. | Core. |  |
|  |  | The system must provide the ability to extract record entry content prior to output/reporting. | Core. |  |
|  |  | The system must enable a user accessing data that contain one or more links to determine the presence of each link and be provided with sufficient information to determine the importance of specifically retrieving and reviewing the referenced health record entries. | Core. |  |
|  |  | The system must be able to present the relationship between one or more health record entries connected through changes in the life-cycle status of an activity or plan (e.g. if a scheduled activity is later cancelled). | Core. |  |
|  |  | The system must provide the ability to render active health issues of all patients as per their EHRs, according to different selection criteria (e.g. per age, disease, geographical environment). | Core. |  |
|  |  | The system must provide the ability to present a list of active health issues as per a patient’s EHR. | Core. |  |
|  |  | The system must be able to present clinical data according to various recognised conventions, including source oriented, time oriented, problem oriented, overview of health issues, care plan, and supporting the generation of tabular and graphical trends as dictated by jurisdictional policies and mandates. | Core. |  |
|  |  | The system must provide the ability to represent lists of data items and data values within a health record entry such that their original intended order is preserved. | Core. |  |
|  |  | The system must provide the ability to represent data that were originally represented as a table such that the logical relationships of the data to row and column headings are preserved. | Core. |  |
|  |  | The system must be able to represent multiple values of the same measurement(s) taken at closely proximate times, e.g. as a time series. | Core. |  |
|  |  | The system must be able to represent any original longitudinal partitions of a health record, e.g. periods of care, which might be defined retrospectively. | Core. |  |
|  |  | The system must provide the ability to represent health status, functional status, health issues, and environmental circumstances applicable to a patient (as per the patient’s EHR). | Core. |  |
|  |  | The system must provide the ability to represent references to externally held data such as images (if these are not included in the EHR itself) or knowledge artefacts (e.g. educational materials, published papers, care pathways). | Core. |  |
|  |  | The system must be able to present defined and labelled relationships (links) between individual or groups of health record entries. | Core. |  |
|  |  | The system must ensure that an EHR extract specifies the original authorship, time and place of creation and version history for all health record entries within it. | Core. |  |
|  |  | The system must provide the ability to retrieve all of the information authored at any one date, time and context by one person within the EHR system for a subject of care, with its original structural organisation and in its original language. | Core. |  |
|  | Care Support 🡪 Information Exchange. 🡪 Internally Sourced Information. 🡪 **Evidence of Record Entry Extract Event.** | The system must provide the ability to maintain evidence of record entry extraction events to ensure health record integrity and trust and to enable record audits. | Core. |  |
|  |  | The system must audit each occurrence when record entry content is extracted. | Core. |  |
|  |  | The system must capture the identity of the organisation where record entry content is extracted. | Core. |  |
|  |  | The system must capture the identity of the patient who is subject of extracted record entry content. | Core. |  |
|  |  | The system must capture the identity of the user extracting record entry content. | Core. |  |
|  |  | The system must capture the identity of the system application which extracted record entry content. | Core. |  |
|  |  | The system must capture the type of record event trigger (i.e. extract). | Core. |  |
|  |  | The system must capture the date and time that record entry content is extracted. | Core. |  |
|  |  | The system must capture the identity of the location (i.e. network address) where record entry content is extracted. | Core. |  |
|  |  | The system must capture the rationale for extracting record entry content. | Core. |  |
|  | Care Support 🡪 Information Exchange. 🡪 Internally Sourced Information. 🡪 **Disclosed Health Record.** | The system must provide the ability to disclose health records. This function must enable the user to formally define a partial health record, or sets of records, for referral or other disclosure purposes. It must enable hardcopy and electronic output; specific selection of sections of the health record; both chronological and specified record element output; and definition of reporting groups, e.g. Group A = patient demographics, history & physical, consultation reports, and discharge summaries; Group B = all information created by one caregiver; Group C = all information from a specified encounter. | Core. |  |
|  |  | The system must provide the ability to render reports consisting of all and part of an individual patient's record according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to capture and maintain the records or reports that are considered the formal health record for disclosure purposes. | Core. |  |
|  |  | The system must provide the ability to render reports in both chronological and specified record elements order. | Core. |  |
|  |  | The system must provide the ability to render a chronological overview of the entire EHR for a patient, including prospective, concurrent and retrospective data. | Core. |  |
|  |  | The system must provide the ability to maintain and render hardcopy and electronic report summary information (e.g. demographics, procedures, medications, labs, immunizations, allergies, vital signs). | Core. |  |
|  |  | The system must provide the ability to capture and maintain reporting groups (i.e. print sets) for specific types of disclosure or information sharing, e.g. Group A = patient demographics, history & physical, consultation reports, and discharge summaries; Group B = all information created by one caregiver; Group C = all information from a specified encounter. | Core. |  |
|  |  | The system must provide the ability to render patient identifying information on each page of reports (i.e. hard copy and electronic) according to organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to update reports to match mandated formats. | Core. |  |
|  |  | The system must provide the ability to render a report that includes metadata for disclosure purposes (e.g. point of record exchange). | Core. |  |
|  |  | The system must provide the ability to manage data-visibility [hide or redact] (remove from view, and/or output) data elements or portions of a report to prevent a given recipient from seeing certain data according to organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to capture and render [cite] the reasons for redaction. | Core. |  |
|  |  | The system must provide the ability to render [reproduce] a copy of the redacted document/record (e.g. through rules, storing a copy). | Core. |  |
|  |  | The system must provide the ability to render patient care events sorted or configured by date and time ranges and data/record type. | Core. |  |
|  |  | The system must provide the ability to maintain a record of disclosure/release that includes the recipient and outbound content. | Core. |  |
|  |  | The system should provide the ability to render wrist bands that include appropriate demographic and clinical information. | Non-Core. |  |
|  |  | The system must provide the ability to render a record summary using the format specified by an organisation to which a patient is transferred. | Core. |  |
|  |  | The system must support requests for one or more classes of health record information (e.g. for specific categories of clinical data). | Core. |  |
|  | Care Support 🡪 Information Exchange. 🡪 Internally Sourced Information. 🡪 **Label printing.** | The system must provide the ability to print different types of labels.  Examples of labels that need to be oriented include:   1. Patient labels for hospital admission and emergency response care during a disaster 2. Labels to mark collected specimen 3. Labels with patient demographics 4. Labels to mark patient home medication when admitted to hospital 5. Medication labels when medication is dispensed. | Core. |  |
|  |  | The system must provide the ability to print label content as barcode, QR code, text, or any combination of these formats as selected by the system user. | Core. |  |
|  |  | The system must provide the ability to select data fields to be printed on a label, and to be available for re-use. | Core. |  |
|  |  | The system must provide the ability to link with various types of printers to allow for printing of different types of labels. | Core |  |
|  | Care Support 🡪 Information Exchange. 🡪 Internally Sourced Information. 🡪 **Information View.** | The system must provide the ability to manage user-defined information views. The system must enable users to tailor views of information for the preferences or the requirements of an organisation unit, occupation, role, individual, discipline etc. When applicable, an information view is constrained by the RBAC rules. | Core. |  |
|  |  | The system must provide administrators the ability to capture preferences (e.g. by user, role or context) for rendering information. | Core. |  |
|  |  | The system must provide the ability to capture a user's preference for rendering information. | Core. |  |
|  |  | The system must manage role-based data-rendering options. | Core. |  |
|  |  | The system must provide authorised users the ability to tailor their presentation of information according to personal preferences, and/or organisational policy. | Core. |  |
|  | Care Support 🡪 Information Exchange. 🡪 Internally Sourced Information. 🡪 **Presentation Filters.** | The system must provide the ability to manage presentation filters. Presentation filters present system users with specialised, context-based presentation views. Context is determined by encounter-specific values, clinical protocols and business rules. Protocols/rules are based on factors such as care setting, encounter type (inpatient, outpatient, home health, assessment, medical classification examination, routine, emergency, educational, etc), provider type, patient's EHR, health status, demographics, and the initial purpose of the encounter. The user views are configurable by users or IT personnel. For example, a mobile healthcare worker using a wireless laptop at a patient's home accesses a home care-specific workflow synchronised with the patient's care plan and tailored for interventions applicable to this patient, including chronic disease management protocols. Whereas an information view is more general, a presentation filter is more context specific. | Core. |  |
|  |  | The system must provide the ability to capture and maintain presentation filters that are specific to the types of encounters (e.g. care provider specialty, location of encounter, date of encounter, associated diagnosis). | Core. |  |
|  |  | The system must provide the ability to capture and maintain presentation filters that are specific to the patient demographics. | Core. |  |
|  |  | The system must provide the ability to capture and maintain (i.e. tailor) an individual user's "user view". | Core. |  |
|  | Care Support 🡪 Information Exchange. 🡪 Internally Sourced Information. 🡪 **Standard Report Generation.** | The system must provide the ability to manage standard report generation. This system function must provide tools for generating standard reports. It must give providers and administrators access to data in the EHR for clinical, administrative, and financial decision-making, audit trail and metadata reporting, and also enable them to create reports for patients. | Core. |  |
|  |  | The system must provide the ability to render reports of structured clinical and administrative data using reporting tools. | Core. |  |
|  |  | The system must provide the ability to extract unstructured clinical and administrative data for inclusion in the report generation process. | Core. |  |
|  |  | The system must provide the ability to extract and transmit reports generated. | Core. |  |
|  |  | The system must provide the ability to capture and maintain report parameters, based on patient demographic, and/or clinical data, which would allow sorting, and/or filtering of the data. | Core. |  |
|  |  | The system must provide the ability to save report parameters for generating subsequent reports. | Core. |  |
|  |  | The system must provide the ability to edit one or more parameters of a saved report specification when generating a report. | Core. |  |
|  |  | The system must provide the ability to render automated reports as required by industry and regulatory bodies. | Core. |  |
|  |  | The system must provide the ability to extract facility level data at an organisational level in support of organisational initiatives. | Core. |  |
|  |  | The system must provide the ability to render a cumulative directory of all personnel who use or access the data. | Core. |  |
|  |  | The system must support filtering or selective retrieval for entries of a particular type. | Core. |  |
|  |  | The system must support filtering or selective retrieval for entries authored by a particular person or role. | Core. |  |
|  |  | The system must support filtering or selective retrieval for entries occurring in a particular department, institution, facility or military operation. | Core. |  |
|  |  | The system must support filtering or selective retrieval for entries recorded at a particular point in time or within a time interval. | Core. |  |
|  |  | The system must support filtering or selective retrieval for entries containing a particular term or terms. | Core. |  |
|  |  | The system must support filtering or selective retrieval for entries relating to a particular health issue. | Core. |  |
|  |  | The system must support filtering or selective retrieval for entries contributing to a particular care plan. | Core. |  |
|  |  | The system must support filtering or selective retrieval for entries containing particular data types. | Core. |  |
|  |  | The system must support filtering or selective retrieval for entries with particular contextual values, such as a life-cycle status. | Core. |  |
|  | Care Support 🡪 Information Exchange. 🡪 Internally Sourced Information. 🡪 **Ad hoc Queries and Reports.** | The system must provide the ability to manage ad hoc queries and reports. This function must provide users with tools to generate ad hoc queries and reports. It must produce customised views and summarised information from a patient's comprehensive EHR. View options: arranged chronologically, by problem, or other parameters, and filtered or sorted. | Core. |  |
|  |  | The system must provide the ability to render ad hoc query and reports of structured clinical and administrative data. | Core. |  |
|  |  | The system must provide the ability to capture and render information extracted from unstructured clinical and administrative data in the report generation process. | Core. |  |
|  |  | The system must provide the ability to extract and transmit ad hoc reports generated. | Core. |  |
|  |  | The system must provide the ability to capture and maintain report parameters, based on patient demographic, and/or clinical data, which would allow sorting, and/or filtering of the data. | Core. |  |
|  |  | The system must provide the ability to save report parameters for generating subsequent reports. | Core. |  |
|  |  | The system must provide the ability to edit one or more parameters of a saved report specification when generating a report using that specification. | Core. |  |
|  |  | The system must provide the ability to render reports, using internal or external reporting tools, based on the absence of a clinical data element (e.g. a laboratory test has not been performed in the last year). | Core. |  |
|  |  | The system must provide the ability for the patient to render [query] the financial data and the data about his or her health-related accounts. | Core. |  |
|  |  | The system must provide the ability to present and transmit customised views of summarised information based on sort and filter controls for date or date range, problem, or other clinical parameters. | Core. |  |
|  |  | The system must provide the ability to present and transmit summarised information through customised views based on prioritization of chronology, problem, or other pertinent clinical parameters. | Core. |  |
|  |  | The system must provide the ability for a provider to capture and maintain filters to search for previous events (e.g. encounters, reports, consults) meeting specified criteria. | Core. |  |
|  | Care Support 🡪 Information Exchange. 🡪 Internally Sourced Information. 🡪 **Registry Information Exchange.** | The system must provide the ability to exchange information with notifiable and other registries. This function must enable the automated and user-initiated exchange of individuals' structured demographic and clinical information with notifiable and other registries (such as immunisation registries) for patient monitoring and subsequent epidemiological analysis. Exchanges must use standard data transfer protocols or messages and the function must allow for updating and configuration of communication with new registries. | Core. |  |
|  |  | The system must provide the ability to exchange structured demographic and clinical information with registries (e.g. local, disease specific, notifiable, patient, provider, organisation, or health services registries). | Core. |  |
|  |  | The system must provide the ability to render and tag registry information as reviewed and the information's related assessment of validity or applicability for clinical, financial or administrative activities. | Core. |  |
|  |  | The system must provide the ability to maintain information received from registries (e.g. local, disease specific, notifiable, patient, provider, organisation, or health services registries). | Core. |  |
|  |  | The system must provide the ability to receive structured demographic and clinical information from registries. | Core. |  |
|  |  | The system must provide the ability to harmonise system information with registry information. | Core. |  |
|  | Care Support 🡪 Information Exchange. 🡪 Internally Sourced Information. 🡪 **Summary Record of Care.** | The system must provide the ability to manage patients’ summary records of care. Summary record of care includes summary views and reports of a patient's episode of care and/or comprehensive EHR. It is subject to privacy/confidentiality-related legislation and policy. At the conclusion of an episode of care, summary views and reports and service reports, such as discharge summaries, specialist or consultation reports and public health reports are created using the information from the EHR. Summary records of care is rendered in accordance with privacy/confidentiality-related legislation and policy. | Core. |  |
|  |  | The system must provide the ability to render summaries of the patient's comprehensive EHR that include at a minimum: problem list[[5]](#footnote-5), medication list, allergy and adverse reaction list, diagnoses and procedures. | Core. |  |
|  |  | The system must support the generation, representation, persistence and maintenance of clinical summaries. | Core. |  |
|  | Care Support 🡪 Information Exchange. 🡪 Internally Sourced Information. 🡪 **Health Services Reports.** | The system must provide the ability to manage health service reports. Health service reports are required by authorised health entities. During care, providers must be prompted to collect sufficient information to avoid duplicate, retrospective or other additional data entry for health management programs and reporting. Examples include reports on notifiable conditions, immunisations, cancer registry, and discharges as required by public health. | Core. |  |
|  |  | The system must render a notification that prompts providers on the data needed for end of encounter reporting during the continuum of care to streamline end of care data collection. | Core. |  |
|  |  | The system must provide the ability to generate a time log of all actions/treatments during an encounter and during an episode of care (which entails more than one encounter), For example the time log for a hospital episode of care would reflect admission, administration of pre-surgery medication, arrival at the theatre, actions in the theatre, recovery room, back in ward. | Core. |  |
|  |  | The system must provide the ability to render service reports at the completion of an episode of care (e.g. discharge summaries or public health reports) using data collected during the encounter. | Core. |  |
|  |  | The system must provide the ability to capture (i.e. trigger) and render the collection of death certificate data in the event that a patient is tagged as deceased. | Core. |  |
|  |  | The system must provide the ability to capture and render the acknowledgement that health service reports have been received. | Core. |  |
|  |  | The system must render a notification that prompts providers on the information needed for regulatory safety reporting. | Core. |  |
|  | Care Support 🡪 Information Exchange. 🡪 Internally Sourced Information. 🡪 **Geospatial Reporting.** | The system must provide the ability to manage geospatial reporting. | Core. |  |
|  |  | This system must provide ad hoc and predefined visual reports (on-screen or paper-based) on the geographical and locational distribution of things such as resources (e.g. facilities, providers, equipment, ambulances, etc), patients, disease prevalence, etc. It must provide “big picture” reports (e.g. the availability of nursing personnel across a specified geographical area) with a “drill-down” capability to lower levels of detailed information. | Core. |  |
|  |  | The system must provide the ability to locate and track patients and resources within a facility (e.g. a hospital) in real-time (using, e.g. Wi-Fi location tracking) or on the basis of their allocations and differentiate between resources that are in use and that are available for response like an ambulance. | Core. |  |
|  | Care Support 🡪 Information Exchange. 🡪 **Externally Sourced Information.** | The system must provide the ability to capture and render externally sourced information. The system must capture and render externally sourced information appropriately alongside other related information in the EHR. Externally sourced information consists of paper-based and electronic documentation and information relevant to the patient record or other parts of the EHR. External sources are outside the organisation, and include clinical, administrative, and financial information systems, other EHR-Ss/eHealth systems and data from information exchange networks. | Core. |  |
|  |  | The system must provide the ability to capture and store a reference to externally sourced information. | Core. |  |
|  |  | The system must provide the ability to capture and store a reference to externally sourced Emergency Medical Services (EMS) information. | Core. |  |
|  |  | The system must appropriately identify any third-party source of information documented in an EHR, such as information provided by a family member, another institution (e.g. providing a laboratory result) or a physical device (like a cardiac monitor). | Core. |  |
|  |  | The system must provide the ability to render tagged patient health information derived from administrative or financial data and the source of that data for use by authorised users. | Core. |  |
|  |  | The system must provide the ability to capture, store and render external documents. | Core. |  |
|  |  | The system must provide the ability to capture, store and render scanned documents. | Core. |  |
|  |  | The system must provide the ability to capture, store and render computable documents (e.g. HL7 Clinical Document Architecture (CDA), laboratory results or medication lists). | Core. |  |
|  |  | The system must provide the ability to store imaged documents or link to the imaged documents in imaging systems. | Core. |  |
|  |  | The system must provide the ability to receive from an external source unstructured, text-based documents and reports. | Core. |  |
|  |  | The system must provide the ability to receive from an external source structured, text-based documents and reports. | Core. |  |
|  |  | The system must provide the ability to uniquely tag and render scanned documents based on the document type, the date of the original document and the date of scanning according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to link documentation and annotations with structured content (e.g. link information gathered during an office visit, phone communication, or e-mail consult with structured content that is stored as a laboratory result, problem, or diagnosis). | Core. |  |
|  |  | The system must secure all modes of EHR data exchange. | Core. |  |
|  |  | The system must route electronically exchanged EHR data only to/from known and authenticated destinations/sources (according to applicable healthcare-specific rules and relevant standards). | Core. |  |
|  |  | The system must capture audit information about changes to the status of sources and destinations. | Core. |  |
|  |  | The system must encrypt and decrypt EHR data that is exchanged over a non-secure link. Note that this requirement is applicable to externally sourced information as well as to internally sourced information that are communicated externally. | Core. |  |
|  |  | The system must exchange data using recognised standards-based encryption mechanisms according to RSA industry standards, organisational policy, and/or jurisdictional law, for cases where encryption is used. Note that this requirement is applicable to externally sourced information as well as to internally sourced information that are communicated externally. | Core. |  |
|  |  | The system must provide acknowledgment of receipt if the eHealth system is the recipient of a secure data exchange. | Core. |  |
|  |  | The system must provide the ability to determine static or dynamic addresses for known and authorised sources and destinations. | Core. |  |
|  |  | The system must provide the ability to render a notification or alert based on information received from an external source according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must be able to identify the source of information received from external sources. | Core. |  |
|  |  | The system must provide the ability to capture and store computable data (e.g. laboratory results, telemetry, or medication details). | Core. |  |
|  |  | The system must provide the ability to capture and store a reference to external data. | Core. |  |
|  |  | The system must provide the ability to capture and store externally sourced computable data (e.g. laboratory results, telemetry, medication details). | Core. |  |
|  |  | The system must provide the ability to capture and store externally sourced standards-based structured, codified data. | Core. |  |
|  |  | The system must provide the ability to capture and store laboratory test data as distinct data elements (e.g. test name, laboratory sample status, date/time of collection, test results, original test units, laboratory panel name, pre-defined testing conditions met indicator, specimen identifier, reference range lower limit, reference range upper limit, laboratory identifier, abnormal flag, and clinical significance indicator). | Core. |  |
|  |  | The system must provide the ability to capture and store externally sourced clinical documentation as structured data, where appropriate, including the original, updates and addenda. | Core. |  |
|  |  | The system must provide the ability to render externally sourced clinical documents, relevant to the patient record alongside other information in the patient record. | Core. |  |
|  |  | The system must provide the ability to render externally sourced clinical data, relevant to the patient record alongside other information in the patient record (e.g. product labelling information should be rendered alongside the patient's record). | Core. |  |
|  |  | The system must provide the ability to capture, store and render health-related data from non-medical devices (e.g. digital camera and sound recorder). | Core. |  |
|  |  | The system must provide the ability to capture, store and render information transmitted from the EMS (e.g. wound site, nature of the wound, vital signs). | Core. |  |
|  |  | The system must provide the ability to capture and store an audio file from an EMS. | Core. |  |
|  |  | The system must provide the ability to capture, store and render clinical images (e.g. radiographs, pictures, video/audio, waveforms) received from external sources. | Core. |  |
|  |  | The system must provide the ability to receive from an external source clinical result images (e.g. radiologic images). | Core. |  |
|  |  | The system must provide the ability to receive from an external source other forms of clinical results (e.g. wave files of Electrocardiogram (ECG) tracings or psychological assessment results). | Core. |  |
|  |  | The system must capture the source of clinical data provided on behalf of the patient and tag the data accordingly. | Core. |  |
|  |  | The system must provide the ability for an authorised user (e.g. clinician) to tag as accurate and verified patient-originated data (when appropriate and when a verification source is available) for inclusion in the patient record (e.g. patient-originated allergy report is verified by clinician so that it may appear in the allergy list). | Core. |  |
|  |  | The system must capture patient-sourced data distinctly from provider-sourced data (i.e. ensure that provider sourced data is not modified by patient-sourced data). | Core. |  |
|  |  | The system must capture both structured and unstructured patient-originated data to ensure long-term retention and preservation of EHR record entries without alteration. | Core. |  |
|  |  | The system must provide the ability to render a tag that patient health information is externally sourced when such information is rendered. | Core. |  |
|  |  | The system should provide the ability to send notifications to consumer health solutions, such as home monitoring devices. | Non-Core. |  |
|  |  | The system should provide the ability to receive notifications from consumer health solutions, such as home monitoring devices. | Non-Core. |  |
|  |  | The system should provide the ability to capture patient-originated data and tag that data as such. | Non-Core. |  |
|  |  | The system should tag the data as patient captured in cases where the system provides the ability for the patient to capture data directly | Non-Core. |  |
|  |  | The system should provide the ability to render patient-originated data. | Non-Core. |  |
|  |  | The system should provide the ability for an authorised user to annotate, but not alter, patient-originated data. | Non-Core. |  |
|  |  | The system should provide the ability to capture patient-originated annotations on provider-sourced data and tag the annotations as patient-sourced. | Non-Core. |  |
|  |  | The system should provide the ability to capture, store and render patient health data derived from administrative or financial data and tag it as such. | Non-Core. |  |
|  |  | The system must provide the ability to capture, store, and render, the source of patient health data derived from administrative and financial data. | Core. |  |
|  |  | The system must provide the ability to annotate patient health information derived from administrative or financial data (e.g. by providing text-based comments, attaching a picture of an injury, or attaching an image of a supporting document). | Core. |  |
|  |  | The system must provide the ability to capture text-based reports (e.g. x-ray reports, discharge summaries, history & physicals) with any mechanism. It must at least include:   1. Optical character recognition (OCR). | Core. |  |
|  |  | 1. Portable document format (PDF). | Core. |  |
|  |  | 1. Image file of a report. | Core. |  |
|  | Care Support 🡪 Information Exchange. 🡪 **Remote Care Information.** | The system should provide the ability to manage remote care information. Remote care information receives, and integrates into the EHR, information that has been electronically generated via remote care functions. The system must subject this information to the same rules for validation, CDS, security, etc as information that is captured in the conventional way. | Non-Core. |  |
|  |  | The system should provide the ability to capture/receive electronic data from medical devices according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  |  | The system should provide the ability to render information collected from medical devices as part of the medical record. | Non-Core. |  |
|  |  | The system should capture and maintain the following information of a device when it is suspected as the cause of a SAE: brand name, common device name, manufacturer, model number, catalogue number, serial number, lot number, expiration date, other number(s), operator of device, if implanted (date), if explanted (date), single or multiple use device indicator (i.e. if this is a single use device that was reprocessed and reused on a patient). | Non-Core. |  |
|  |  | The system should provide the ability to present data captured/received from medical devices for verification by a provider according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law, and present the identification of the relevant device. | Non-Core. |  |
|  |  | The system should link to originating medical device as identified by original device identification and device type for captured data. | Non-Core. |  |
|  |  | The system should provide the ability to capture the date/time from medical devices. | Non-Core. |  |
|  |  | The system should provide the ability for the user to manually capture data from medical devices. | Non-Core. |  |
|  | Care Support 🡪 Information Exchange. 🡪 **Equipment Care Information.** | The system must provide the ability to manage care information obtained from equipment. | Core. |  |
|  |  | The system must provide the ability to receive, and integrate into the EHR, information that has been electronically generated via network-connected electronic medical equipment used by providers at the PoC and patient wearables. | Core. |  |
|  |  | The system must provide the ability for information that has been electronically generated via network-connected electronic medical equipment used by providers at the PoC and patient wearables, to be subjected to the same rules for validation, CDS, security, etc as information that is captured in the conventional way. | Core. |  |
|  | Care Support 🡪 **Communication.** | Communication function includes bidirectional and unidirectional communication as well as message structuring. | Core. |  |
|  | Care Support 🡪 Communication. 🡪 **Bidirectional Communication.** | The system must provide the ability to manage bidirectional communication. Bidirectional communication addresses intra-organisational communication and communication with external organisations and individuals. Bidirectional communication uses technologies such as Internet Protocol (IP) telephony, email (both structured and unstructured), SMS, IM and other forms of messaging. Although a large part of such two-way communication is inherently part of, and triggered by, predefined workflows, it can also be directly user-initiated from the communication portal. Bidirectional communication is integrated with, and often used in conjunction with, the information exchange function. Users use information exchange to selectively extract a set of relevant patient-specific EHR-based clinical and/or administrative information, which they then communicate to one or more other users by means of a bidirectional communication function. The use of information exchange is particularly relevant for inter-provider communication. | Core. |  |
|  |  | The system must provide the ability to render patient status tracking data on patient status devices or other patient tracking systems. | Core. |  |
|  |  | The system must determine and render patient information appropriate to the care setting, and/or the patient's condition, on status/patient/tracking displays. | Core. |  |
|  |  | The system must render patient information that can be used for status and patient tracking systems (e.g. tracking display, Emergency Department (ED) status board) that displays, as a minimum: patient identification, patient location, medical condition, care process status, study status, vital signs, and inter-staff communication notes as applicable. | Core. |  |
|  |  | The system must provide the ability to render patient transfer information to other health care organisations (e.g. hospitals, clinics, specialists, nursing homes) according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to render selected patient transfer information to non-health care organisations (e.g. funeral home) according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  | Care Support 🡪 Communication. 🡪 Bidirectional Communication. 🡪 **Inter-provider Communication.** | The system must provide the ability to manage inter-provider communication. Inter-provider communication applies to patient-specific clinical issues, can occur in many diverse clinical scenarios, and usually stems from an encounter/episode of care. Inter-provider communication is an enabler of telehealth. Workflows can be defined and triggered for specific scenarios such as provider-pharmacy//dispensary communication. | Core. |  |
|  |  | The system must enable secure voice communication between providers. | Core. |  |
|  |  | The system must enable secure video communication/conferencing between providers. | Core. |  |
|  |  | The system should provide the ability to capture and store in the patient record voice and video communication (including verbal orders) between providers including the identification of these providers. | Non-Core. |  |
|  |  | The system must provide the ability to integrate scanned documents from providers into the patient record. | Core. |  |
|  |  | The system must provide the ability to receive and transmit messages or information, including photos/images in real time. (Synchronous information exchange). | Core. |  |
|  |  | The system must provide the ability to receive and transmit clinical information (e.g. referrals) via secure e-mail or other secure standard electronic means. (Asynchronous information exchange). | Core. |  |
|  |  | The system must provide the ability to transmit (e.g. via e-mail) specific patient data (e.g. reports, results, documents, photos/images) to alternate providers/facilities in an emergency care context and in context of routine, specialist and emergency telehealth. | Core. |  |
|  |  | The system must provide the ability to transmit specific patient diagnostic quality images (e.g. sound, ECG waveform, ECG graph, video, diagnostic imaging) to alternate providers/facilities in an emergency care context and in context of routine, specialist and emergency telehealth. | Core. |  |
|  |  | The system must provide the ability to receive and transmit in a secure manner electronic multi-media data types representing pictures, sound clips, or video as part of the patient record. | Core. |  |
|  |  | The system must provide the ability for the user to render patient status (e.g. arrival, admission, discharge, death) notification to providers and care managers (e.g. the Emergency Department physician sends a notification to members of the care team that the patient has been admitted). | Core. |  |
|  |  | The system must provide the ability to render patient status (e.g. arrival, admission, discharge, death) notification to providers and care manager, based on clinical rules & protocols (e.g. a rules-engine automatically sends a notification to all members of the care team that the patient has arrived at the hospital). | Core. |  |
|  |  | The system must provide the ability for the user to render patient care plans/instructions to providers and care managers when a patient's status has changed. | Core. |  |
|  |  | The system must provide the ability to render patient care plans/instructions to providers and care managers based on clinical rules & protocols when a patient's status has changed. | Core. |  |
|  |  | The system must provide the ability to render an alert to an originating *external* provider who has submitted information or a request, about the target internal provider's unavailability (e.g. vacations) and recommend rerouting of the information or request. | Core. |  |
|  |  | The system must provide the ability to render an alert to the originating *internal* provider who has submitted information or a request, about the target internal provider's unavailability (e.g. vacations) and recommend rerouting of the information or request. | Core. |  |
|  |  | The system must provide the ability for providers and pharmacies to receive and transmit clinical information via secure email or other electronic means, on both general and specific orders. | Core. |  |
|  |  | The system must provide the ability to receive and transmit secure real-time messages or services. | Core. |  |
|  |  | The system must provide the ability to transmit information on workflow tasks as part of communication to the provider. | Core. |  |
|  | Care Support 🡪 Communication. 🡪 Bidirectional Communication. 🡪 **Professional-provider Communication.** | The system must provide the ability to manage provider-professional communication. Provider-professional communication can be triggered by a workflow when a provider needs to communicate formally (with notifications and related admin or clinical info) with other professional individuals or organisations (e.g. coroners, medical examiners, law enforcement) regarding a healthcare event (e.g. patient deaths, births, gunshot wounds, etc). | Core. |  |
|  |  | The system should provide the ability to determine, tag and present healthcare event records for notification to appropriate personnel or systems (e.g. events requiring notification to medical examiner, coroner, funeral director, law enforcement, vital records organisations), according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  |  | The system must provide the ability to capture and store an indicator of death/fetal death notification to appropriate personnel or systems (e.g. medical examiner, coroner, funeral director, law enforcement, vital records organisations) including the date and time of the notification event, according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to capture and store an indicator of birth notification to appropriate personnel or systems (e.g. general practitioner, vital records organisation) including the date and time of the notification event, according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to capture and render clinical details regarding birth, death and fetal death events to appropriate personnel or systems according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to capture and render administrative details regarding birth, death and fetal death events to appropriate personnel or systems according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  | Care Support 🡪 Communication. 🡪 Bidirectional Communication. 🡪 **Administrative Communication.** | The system should provide the ability to manage administrative communication. Administrative communication concerns patient-specific admin issues and can be used between any employees for this purpose. | Non-Core. |  |
|  | Care Support 🡪 Communication. 🡪 Bidirectional Communication. 🡪 **Provider-patient Communication.** | The system must provide the ability to manage provider-patient communication. Examples of provider-patient communication include: a provider informs his/her patient by email of lab test results; a patient emails a physician a request for a medication refill; an asthmatic patient sends peak flow logs/diaries to his/her provider; a hospital provides selected patients with care-related instructions, e.g. instructions regarding pre- and post-procedural and post-treatment/discharge requirements, self-administration of medication and self-care (instructions may also be more patient-specific, including diet, transportation assistance, convalescence, follow-up with physician, etc). Communication regarding self-care can make use of the patient education function of decision support. The nature and content of such communication is recorded in terms of business rules. | Core. |  |
|  |  | The system must provide the ability to determine and render standardised instruction sets pertinent to the patient condition, for procedures, or scheduled events. | Core. |  |
|  |  | The system must provide the ability to render instructions pertinent to the patient as selected by the provider. | Core. |  |
|  |  | The system must provide the ability to transmit instruction information in electronic format to be provided to the patient. | Core. |  |
|  |  | The system must provide the ability to render, as part of patient instructions, details on further care such as follow up, return visits and appropriate timing of further care. | Core. |  |
|  |  | The system must provide the ability to capture an indication that instructions were given to the patient. | Core. |  |
|  |  | The system must provide the ability to capture the actual instructions given to the patient or a reference to the document(s) containing those instructions. | Core. |  |
|  |  | The system must provide the ability to annotate patient-specific instructions. | Core. |  |
|  |  | The system must provide the ability to capture and maintain, as distinct data, the reason for variation from rule-based clinical messages and patient information. | Core. |  |
|  |  | The system should provide the ability to manage patient instructions in multiple languages, i.e. the 11 official languages of South Africa (plus the 12th, SA sign language). | Non-Core. |  |
|  |  | The system must provide the ability to manage a list of appropriate patient instructions based on age. | Core. |  |
|  |  | The system must provide the ability to manage a list of appropriate patient instructions based on gender. | Core. |  |
|  |  | The system must provide the ability to manage a list of appropriate patient instructions based on diagnosis. | Core. |  |
|  |  | The system should provide the ability to manage a list of appropriate patient instructions based on reading level. | Non-Core. |  |
|  |  | The system should provide the ability to render educational materials using alternative modes to accommodate patient sensory capabilities (e.g. vision impairment, hearing impairment). | Non-Core. |  |
|  |  | The system must provide video conferencing ability between a provider and a patient to enable telehealth. | Core. |  |
|  |  | The system must provide the ability to securely store and render recordings of video conferencing and voice between a provider and a patient. | Core. |  |
|  | Care Support 🡪 Communication. 🡪 Bidirectional Communication. 🡪 **Administrator-patient Communication.** | The system should provide the ability to manage administrator-patient communication regarding patient-specific admin issues. Administrative communication concerns patient-specific admin issues and can be used between any employees for this purpose. | Non-Core. |  |
|  | Care Support 🡪 Communication. 🡪 Bidirectional Communication. 🡪 **Provider-employer Communication.** | The system must provide the ability to manage provider-employer communication. Provider-employer communication provides employers of patients with notifications and assistance in special work-related health requirements. It is based on a patient’s employment information (e.g. pilots, divers, firemen, and transportation workers), and applies when the patient's work environment may impact his/her assessment and treatment. | Core. |  |
|  |  | The system must provide the ability to capture patient's employment data relevant to potential medical conditions. | Core. |  |
|  |  | The system must provide the ability to capture data used to determine if a patient is able to fulfil physical job requirements and/or special work requirements as part of their medical disposition. | Core. |  |
|  |  | The system must provide the ability to manage reporting to employers on a patient's ability to fulfil physical or special job requirements as a result of their medical disposition. | Core. |  |
|  | Care Support 🡪 Communication. 🡪 Bidirectional Communication. 🡪 **General Communication.** | The system should provide the ability to manage general communication. General communication is used by all employees and for purposes (often informal) not covered by any of the aforesaid types of communication. | Non-Core. |  |
|  | Care Support 🡪 Communication. 🡪 **Unidirectional Communication.** | The system must provide the ability to manage unidirectional communication. Unidirectional communication consists of messages that serve as alerts, reminders, and notifications. These messages are unidirectional (i.e. recipients cannot reply to them) and utilise technologies such as email (both structured and unstructured), SMS, and IM (e.g. WhatsApp). Unidirectional messages can be function-generated and user-initiated. An example of a unidirectional message is when a provider sends proof that a sterility cycle has been done on equipment before the patient was examined. | Core. |  |
|  | Care Support 🡪 Communication. 🡪 Unidirectional Communication. 🡪 **Function Generated Messages.** | The system must provide the ability to manage function-generated messages. Function-generated messages are automatically generated by non-interactive functions under predefined conditions. Examples of non-interactive (not user-driven) functions include: “batch” functions that periodically traverse entire EHR databases, usually for population care purposes; and functions that generate lab test results from lab equipment. | Core. |  |
|  | Care Support 🡪 Communication. 🡪 Unidirectional Communication. 🡪 Function Generated Messages. 🡪 **Decision Support Messages.** | The system must provide the ability to manage decision support messages according to relevant business rules and clinical protocols. Decision support messages are function-generated messages. Example of decision support messages are changes to patient information of patients on the community nursing register that are communicated to the relevant community nursing care nurse. Changes include hospitalisation, address changes, deaths and births. | Core. |  |
|  | Care Support 🡪 Communication. 🡪 Unidirectional Communication. 🡪 Function Generated Messages. 🡪 **Resource Scheduling Messages.** | The system must provide the ability to manage resource scheduling messages. Resource scheduling messages are function-generated messages which, *inter alia*, notify and remind providers and patients of bookings, resource allocations, etc. | Core. |  |
|  |  | The system must provide the ability to render patient reminders. | Core. |  |
|  |  | The system must provide the ability to render provider reminders. | Core. |  |
|  |  | The system must provide the ability to keep record of all resource scheduling messages that were sent to a patient. | Core. |  |
|  |  | The system must provide the ability to keep record of all resource scheduling messages that were sent to a provider. | Core. |  |
|  |  | The system must provide the ability to send a message to a patient that has a confirmed appointment with a provider when the provider is not available anymore for the appointment, e.g. the provider is booked off sick, or when the facility where the patient has an appointment, is not available anymore, e.g. required equipment is out of order. The patient must be provided with available providers (with equipment in working order) to make another appointment. | Core. |  |
|  |  | The system must provide the ability to notify a provider if a patient cancelled an appointment. | Core. |  |
|  | Care Support 🡪 Communication. 🡪 Unidirectional Communication. 🡪 Function Generated Messages. 🡪 **Order Tracking Messages.** | The system must provide the ability to manage order tracking messages. Order tracking messages are function-generated messages which *inter alia*, notifies and alerts providers and/or patients of the process status of specified orders. These messages are generated by order tracking on request from requesters and/or executors of orders. | Core. |  |
|  |  | The system must provide the ability to keep record of all order tracking messages that were sent to patients. | Core. |  |
|  |  | The system must provide the ability to keep record of all order tracking messages that were sent to providers. | Core. |  |
|  | Care Support 🡪 Communication. 🡪 Unidirectional Communication. 🡪 **User Initiated Messages.** | The system must provide the ability to manage user-initiated messages. User-initiated messages are sent on an ad hoc basis by users via a message portal (which must be accessed either directly or via a workflow or an interactive function – the system must make provision for all three access methods). There are two types of user-initiated messages, i.e. employee messages and patient messages. | Core. |  |
|  | Care Support 🡪 Communication. 🡪 Unidirectional Communication. 🡪 User Initiated Messages. 🡪 **Employee Messages.** | The system must provide the ability to manage employee messages that are user-initiated. Employee messages are usually sent en masse either to all employees or to one or more selected employee groups. A group may include employees within the same occupation, organisation unit, healthcare discipline, geographical area, etc. These messages may also be sent to one or more specific individuals. | Core. |  |
|  |  | The system must provide the ability to keep record of all employee messages that were sent. | Core. |  |
|  | Care Support 🡪 Communication. 🡪 Unidirectional Communication. 🡪 User Initiated Messages. 🡪 **Patient Messages.** | The system must provide the ability to manage user-initiated patient messages. Patient messages are usually sent en masse either to all patients or to one or more selected patient groups. A group may include patients that have in common a specific clinical condition, use of a specific medication, area of residence, etc. These messages may also be sent to one or more specific individuals. | Core. |  |
|  |  | The system must provide the ability to keep record of all sent patient messages. | Core. |  |
|  | Care Support 🡪 Communication. 🡪 **Message Structuring.** | The system should provide the ability to manage message structuring. Message structuring is a component of the message portal and is used to predefine templates for structured messages. It does not apply to unidirectional messages that are auto-generated by functions such as decision support, resource scheduling, etc. Such messages are defined in the functions to which they apply. | Non-Core. |  |
|  | Care Support 🡪 Communication. 🡪 **eMail Ticketing.** | Email ticketing capability provides the ability to centralise all customer/external provider interactions into a single location. It assists with effective performance management by converting emails to tickets, thereby ensuring that nothing falls through the cracks. | Core |  |
|  |  | The system must have an ability to automatically convert customer/external provider messages into tickets with unique identifiers. | Core |  |
|  |  | The system must be able to group interactions/documents from one customer/external provider in one place to ensure easier tracking. | Core |  |
|  |  | The system must be able to connect with various email applications. | Core |  |
|  |  | The system must make provision for setting up of customisable rules to support automatic assignment of tickets to a specific team member. | Core |  |
|  |  | The system must make provision for adding and modifying workflow rules that are triggered by ticket changes or time-based conditions. | Core. |  |
|  |  | The system must have an ability to create custom statuses that suit the user’s workflow to identify what stage the is the ticket at. | Core |  |
|  |  | The system must be able to feed information into a live dashboard to ensure real-time monitoring of ticket statuses. | Core |  |
|  |  | The system must have a collision detection intelligence to prevent having more than one person working on the same ticket at the same time. | Core |  |
|  |  | The system must have an ability to set a deadline for a ticket based on set performance management rules. | Core |  |
|  |  | The system must allow tagging of and sending of notifications to other team members where an @mention of their names has been detected. | Core |  |
|  |  | The system must have canned responses to assist with provision of predetermined replies to common questions. | Core. |  |
|  |  | The system must make provision for a search functionality that uses various parameters (e.g. keyword search, ticket number, filters) to support quick retrieval of tickets. | Core. |  |
|  | Care Support 🡪 **Business Intelligence (BI).** | The system must provide business intelligence functionality. Refer to Population Care, Information Exchange and Performance function requirement descriptions that include BI requirements such as data integration, data warehousing, data analysis and reporting, data mining and predictive analysis, data visualisation, data collaboration and sharing. | Core. |  |
|  |  | The system must make provision for integration with AI analytical modules and tools. | Non-Core. |  |
|  | Care Support. 🡪 **PHR-S.** | The system must include PHR-S functionality. | Core. |  |
|  |  | The PHR-S functionality must enable a patient to access his/her PHR from any location, using any browser and any computing device, without storing any PHR or EHR information on the patient’s computing device. | Core. |  |
|  |  | The PHR-S functionality must enable a patient to access the PHRs of his/her dependents form any location, using any browse and any computing device, without storing any PHR or EHR information on the patient’s computing device. | Core. |  |
|  |  | The eHealth system and PHR-S must be integrated and reside on the same computing platform. The same applies to the EHR and PHR. These measures rule out a need to duplicate information between the EHR and PHR as well as a need to duplicate functionality between the PHR-S and the eHealth system. As an authorised PHR-S user, a patient must be subjected to the same privacy, security restrictions (e.g. for access control, public key infrastructure [PKI], etc), business rules, clinical rules & protocols, etc as the users of eHealth system functions. | Core. |  |
|  | Care Support. 🡪 PHR-S. 🡪 **PHR-S Registration.** | The system must make provision for self-registration through a mobile device interface. | Core. |  |
|  | Care Support 🡪 PHR-S. 🡪 **PHR-S Admin Information.** | The system must enable the patient to enquire on, and update, his/her PHR (which is EHR based), non-clinical, personal information by means of certain patient admin record functions, which include patient demographics, subject to subject relationship, patient preferences, patient advance directives, and patient consent and authorisation. These functions might use user interfaces [UIs] tailored for patients by means of the information view function. | Core. |  |
|  | Care Support 🡪 PHR-S. 🡪 **PHR-S Clinical Information.** | The system must provide the patient with read-only access to his/her EHR based clinical information (within its administrative context) generated by patient care provision functions, which include clinical information, self-care, administering, future care, orders, and results. This set of enquiry functions must also include a longitudinal view of the patient’s health information. These functions might use user interfaces [UIs] tailored for patients by means of the information view function. | Core. |  |
|  | Care Support 🡪 PHR-S. 🡪 **PHR-S EHR Annotation.** | The system should provide the ability to the patient to annotate his/her EHR-based clinical information. Although the PHR gives a patient selective access to his/her EHR, the patient cannot change EHR-based clinical information, but can annotate such information. An annotation will be associated with the EHR information to which it applies. | Non-Core. |  |
|  |  | The system should provide the ability that the patient can make the annotation visible to providers, or to hide from providers. | Non-Core. |  |
|  |  | The system should provide the option to a provider to incorporate the content of an annotation into the patient’s EHR. | Non-Core. |  |
|  |  | The system should provide the ability to the patient to reflect his/her point of view on personal health issues. | Non-Core. |  |
|  | Care Support 🡪 PHR-S. 🡪 **PHR-S Education.** | The system should provide the patient with direct access to the patient education function. | Non-Core. |  |
|  | Care Support 🡪 PHR-S. 🡪 **PHR-S RPM Activation.** | The system should provide the ability to activate RPM. The system must enable the patient to connect a mobile patient monitoring device to the RPM function, which must trigger the remote care information function to receive and integrate device-generated information into the patient’s EHR. | Non-Core. |  |
|  | Care Support 🡪 PHR-S. 🡪 **PHR-S Appointment.** | The system should provide the ability to manage patient appointments. PHR-S appointment function must enable a patient to either schedule an appointment at a facility (with the resource scheduling function) or request an appointment via the administrator-patient communication function, using a structured message template for this purpose. | Non-Core. |  |
|  |  | The system must provide the ability to determine information, relevant to the appointment. The information must be communicated to the patient when an appointment is registered. For example, to educate a patient on what to expect during a radiology procedure and how to prepare for the appointment. | Core. |  |
|  |  | The system must provide the ability to a patient to cancel or reschedule an appointment. | Core. |  |
|  |  | The system must highlight available appointments that are in close proximity to the patient’s location. | Core. |  |
|  |  | The system must provide a function that enables the patient to select to view location of military healthcare facilities that are in close proximity to the patient or to view all military healthcare facilities’ locations. | Core. |  |
|  |  | The system must provide the ability to configure relevant business rules, and to apply these rules when a patient is scheduling an appointment, e.g. if a patient has a certain number of missed appointments a different workflow that may include SAMHS authorisation must be applied. | Core. |  |
|  |  | The system must provide the ability to show available appointments at the patient’s preferred healthcare providers as per the patient preferences record. | Core. |  |
|  |  | The system must keep record of missed appointments by patients as well as by providers. | Core |  |
|  | Care Support 🡪 PHR-S. 🡪 **PHR-S Communication.** | The system should provide the ability to manage PHR-S communication. | Non-Core. |  |
|  |  | The system should enable general bidirectional communication between a patient and an administrator (via the administrator-patient communication function) and between a patient and a provider (via the provider-patient communication function). | Non-Core. |  |
|  |  | The system should provide the patient with optional, scenario specific, structured message templates for communication with an administrator or provider. | Non-Core. |  |
|  |  | The system should enable passing documentation back and forth between communicants. | Non-Core. |  |
|  | Care Support 🡪 PHR-S. 🡪 **PHR-S Patient Feedback.** | The system must provide the ability to manage patient feedback via the PHR-S patient feedback function. A patient, for example, has the right to file a complaint if he/she believes privacy rights are being denied, health information is not being protected properly, or clinical information is incorrect. Recording of patient satisfaction is also included in the patient feedback function. | Core. |  |
|  |  | The system must enable a patient to file a complaint or provide positive feedback, which is registered and processed. | Core. |  |
|  |  | The system must provide the ability to keep the patient informed of the progress and outcome of a complaint via the PHR-S communication function. | Core. |  |
|  |  | The system should enable communication via the PHR-S communication function when additional information is required from the patient or when the patient is required to participate in discussions. | Non-Core. |  |
|  |  | The system should provide the ability to the patient to capture comments. | Non-Core. |  |
|  |  | The system should provide the ability to the patient to capture expectations. | Non-Core. |  |
|  |  | The system must provide the ability to prompt the patient to provide patient satisfaction information after an encounter. | Core. |  |
|  | Care Support 🡪 PHR-S. 🡪 **PHR-S Patient Reported Outcomes.** | The system should provide the ability to manage PHR-S patient-reported outcomes. | Non-Core. |  |
|  |  | The system should enable a patient to record (in statistically processable terms as well as associated free text) his/her perception of the outcome of care/treatment received, e.g. surgery, hospital stay, treatment for a particular condition, etc. | Non-Core. |  |
|  |  | The system should provide the ability to link a patient-reported outcome to the relevant treatment as recorded in the patient’s EHR. | Non-Core. |  |
|  |  | The system should provide the ability to record patient feedback as input to client (patient) satisfaction survey. | Non-Core. |  |
|  | Care Support 🡪 **Remote Care.** | The system must enable the rendering of patient care to remote patients by means of telehealth and RPM. Remote care must make use of telecommunications, patient monitoring devices, computing devices (personal computers [PCs], laptops, tablets, and smartphones), client software, and other technology components as required by the extent and manner of remote care deployment. Remote care must integrate and manage these technological components to sustain viable remote support to patient care. Remote care is in turn supported by the functions, equipment and devices, provider-patient communication, and inter-provider communication. | Core. |  |
|  | Care Support 🡪 Remote Care. 🡪 **Telehealth.** | The system must enable patient care of remote patients by means of telehealth. Telehealth is the physical distribution of health-related services and information via technologies such as telecommunications, patient monitoring devices, computing devices (personal computers [PCs], laptops, tablets, and smartphones), client software, and other technology components as required by the extent and manner of remote care deployment. Telehealth functionality could range from a video conference between providers to robotic surgery performed through remote access. That is, it potentially covers a broad functional spectrum. | Core. |  |
|  |  | The system must provide the ability to capture patient data from remote devices and integrate that data into the patient's record. | Core. |  |
|  |  | The system must provide the ability to render patient data to remote devices. | Core. |  |
|  |  | The system must provide the ability to record remote consultations and save as encounter documentation of the relevant encounter. | Core. |  |
|  |  | The system must provide video conferencing capability in support of telehealth. Refer to inter-provider communication and provider-patient communication functions. | Core. |  |
|  | Care Support 🡪 Remote Care. 🡪 **Remote Patient Monitoring.** | The system must provide the ability to manage RPM. RPM uses technology to remotely monitor patients outside conventional clinical settings, such as the home or a remote area. RPM uses mostly telecommunications, mobile patient monitoring devices, and mobile computing devices (tablets, and smartphones). RPM can be regarded as a function of telehealth. | Core. |  |
|  | Care Support 🡪 Remote Care. 🡪 **Remote Care Information [Remote Care].** | The system must provide the ability to manage remote care information. Remote care information receives, and integrates into the EHR, information that has been electronically generated via remote care functions. This information must be subjected to the same rules for validation, CDS, security, etc as information that is captured in the conventional way. | Core. |  |
|  | Care Support 🡪 **Security.** | Security functions, described below does not cover the full spectrum of information security (most of which is generic to all environments). It deals only with security insofar as it relates to, or enables, functions within this document. The security functions are also specific (but not unique) to HI. | Core. |  |
|  | Care Support 🡪 Security. 🡪 **Access Control.** | The system must provide the ability to control access to the eHealth system. Access control function addresses profiling, authentication, authorisation, emergency access control. | Core. |  |
|  |  | The system must provide the ability to manage system and data access rules for all eHealth system resources according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must manage the enforcement of authorisations to access eHealth system resources. | Core. |  |
|  |  | The system must control access to eHealth system resources after a configurable period of inactivity by terminating the session, or by initiating a session lock that remains in effect until the entity re-establishes access using appropriate identification and authentication procedures, according to organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to control access to data according to security clearance of the system user and, /or functionality according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must control access to data, and/or functionality by using multi-factor authentication mechanisms, where one of the factors must be biometric factor that comply with regulatory and policy guidelines. | Core. |  |
|  |  | The system must provide the ability to determine the identity of public health agencies for healthcare purposes through the use of internal, and/or external registry services or directories. | Core. |  |
|  |  | The system must provide the ability to determine the identity of healthcare resources (e.g. Meal Delivery services for homebased patients) and devices (e.g. wheelchairs) for resource management purposes through the use of internal, and/or external registry services or directories. | Core. |  |
|  |  | The system must provide the ability to authorised users to access the system from anywhere, using any wireless computing device without storing any system information on the users’ computing device. | Core. |  |
|  |  | The system must make provision for users that may have more than one role. | Core. |  |
|  | Care Support 🡪 Security. 🡪 Access Control. 🡪 **Authentication.** | The system must provide the ability to manage authentication. Authentication function must authenticate system users and entities before allowing access. All entities are subject to authentication. Examples of entity authentication include username/password; digital certificate; secure token; and biometrics. | Core. |  |
|  |  | The system must authenticate entities (e.g. users, organisations, applications, components, objects, and/or devices) accessing eHealth system protected resources (e.g. functions and data) according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law.  The following authentication mechanisms must be supported by the system:   1. Username and password. | Core. |  |
|  |  | 1. Biometrics. | Core. |  |
|  |  | The system must manage authentication data/information securely (e.g. passwords or biometric data). | Core. |  |
|  |  | The system must maintain configurable conditions and rules which protect against invalid, possibly malicious, authentication attempts according to organisational policy, and/or jurisdictional law (e.g. consecutive invalid logon attempts). | Core. |  |
|  |  | The system must provide the ability to maintain configurable timeframes (e.g. 180 days) for the reuse of passwords in cases where passwords are used to control access to the eHealth system, according to organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to maintain a configurable limit on the reuse of recently used passwords (e.g. the last 5 passwords) according to organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must maintain password strength rules (e.g. requiring a minimum number of characters and inclusion of alpha-numeric complexity). | Core. |  |
|  |  | The system must capture the password using obfuscation techniques (e.g. during user password entry) according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must manage password reset as an administrative function. | Core. |  |
|  |  | The system must provide the ability to update password at the next successful logon in cases where user passwords are initially set or later reset by an administrator. | Core. |  |
|  |  | The system must present limited feedback to the user during authentication. | Core. |  |
|  |  | The system must provide the ability to enter case-sensitive passwords that contain typeable alpha-numeric characters in support of ISO-646/ECMA-6 (aka US ASCII). | Core. |  |
|  | Care Support 🡪 Security. 🡪 Access Control. 🡪 **Authorisation.** | The system must provide the ability to authorise entities to access/use resources (i.e. functions or data) based on user, role, context or a combination of these. User-based authorisation is based on the identity of an entity such as a user or software component. Role based authorisation is based on the role of an entity (e.g. an application or device [e.g. tele-monitor or robotic]; or a nurse, dietician, administrator, legal guardian, and auditor. Context-based authorisation is based on context, such as when a request occurs, explicit time, location, route of access, quality of authentication, work assignment, patient consents and authorisation. | Core. |  |
|  |  | The system must provide the ability to manage sets of access-control permissions granted to an entity (e.g. user, application, device) based on identity, role, and/or context according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide RBAC. The system must provide the ability to manage roles (e.g. clinician versus administrator) and contexts (e.g. legal requirements versus emergency situations) for authorization according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must manage role-based data-capture-options. | Core. |  |
|  |  | The system must maintain a revision history of all entity record modifications. | Core. |  |
|  |  | The system must provide the ability to manage authorisations for the use of portable media in according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  | Care Support 🡪 Security. 🡪 Access Control. 🡪 **Emergency Access Control.** | The system must provide the ability to manage emergency access control. Emergency access control can, within the constraints of policy, temporarily override certain EHR access restrictions as imposed by a provider’s authorisation profile. Its aim is to limit the potential for impeding care provision in an emergency. It must log user activities in the audit record/metadata and must provide reports of emergency access for purposes of compliance monitoring. | Core. |  |
|  |  | The system must provide the ability to define emergency access rules according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to capture categories of emergency access criteria according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law, for example:   1. Single record entry such as single laboratory results, single document, single view. 2. Single patient. 3. Single login session, multiple patients. 4. Site mode allowing simultaneous emergency access to all users. | Core. |  |
|  |  | The system must manage emergency access by individual users based on criteria (e.g. defined rules and categories) according to organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to maintain emergency access time limits according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system should present periodic reminders to a system administrator to review user's emergency access privileges. | Non-Core. |  |
|  |  | The system must provide the ability to capture a reason for emergency access. | Core. |  |
|  |  | The system must provide the ability to render an after-action report for follow up of emergency access. | Core. |  |
|  | Care Support 🡪 Security. 🡪 Access Control. 🡪 **Patient Access.** | The system must provide the ability to manage patient access to the PHR-S that provides access to the patient’s EHR and to EHRs of the patient’s dependants. | Core. |  |
|  |  | The system must apply the same access control, authentication and authorisation restrictions to patient system access than for any system user. | Core. |  |
|  | Care Support 🡪 Security. 🡪 **Non-Repudiation.** | The system must provide the ability to manage non-repudiation. Non-repudiation function must limit the ability of a user to deny (repudiate) data origination, transmission or receipt by that user. Components can include confirmation service, which uses a message transfer agent to create a digital receipt; timestamp, which proves that a document existed at a certain date and time; and the use of standardised timekeeping protocols (e.g. the Integrating the Healthcare Enterprise (IHE) Consistent Time Profile). | Core. |  |
|  |  | The system must capture the identity of the entity taking the action according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must capture time stamp of the initial entry, modification and exchange of data according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must through audits, ensure integrity of data and data exchange and thus prevent repudiation of data origination, transmission or receipt according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. Refer to the audit function and its sub-functions. | Core. |  |
|  | Care Support. 🡪 Security. 🡪 **Signatures.** | The system must provide for electronic signatures as well as digital signatures, dependent on legal requirements of the particular business function. | Core. |  |
|  | Care Support. 🡪 Security. 🡪 Signatures. 🡪 **Electronic Signatures.** | For electronic signatures, signatures whereby a click on an acknowledgement of commitment, or scribble signatures must be provided for. | Core. |  |
|  | Care support. 🡪 Security. 🡪 Signatures. 🡪 **Digital Signatures.** | The system should provide for digital signatures.  For digital signatures, a standards-based signature, based on X509 certificates issued by a certified and accepted Public Key Infrastructure (PKI) system must be used, to be in line with the Electronic Communications and Transactions Act.  For public facing functions like digital signatures (signed by SAMHS), and services hosted by SAMHS, X.509 certificates must be issued by a public PKI service, under the policies of SAMHS. Such a PKI service must be widely accepted and certified, publicly accepted. Preference will be given to CA’s which are locally hosted in South Africa. | Non-Core. |  |
|  | Care Support 🡪 **Privacy.** | The system must provide the ability to enforce privacy. Privacy is the right of an individual to keep himself/herself and his/her information concealed or hidden from unauthorised access and view by others. The system must enforce patient privacy legislation and policy as they apply to different parts of the eHealth system. It must include granting authorisation to access highly sensitive EHR components with explicit patient consent. Privacy rules may vary according to patient vulnerability and information sensitivity. The system must provide the privacy functions below to enable the patient to exercise his/her rights for privacy of health information. | Core. |  |
|  | Care Support 🡪 Privacy. 🡪 **Data Masking.** | The system must enable data-masking. | Non-Core. |  |
|  |  | The system must provide the ability to obscure (mask) specific data elements by replacing sensitive data with realistic but fictional data, which cannot be re-engineered to actual values. The system must provide the ability to mask parts of the EHR (e.g. medications, conditions, sensitive documents) from disclosure according to patient preferences, user role, RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  |  | The system must provide the ability to unmask (override a mask) in emergency or other specific situations in accordance with users' role, and according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core |  |
|  |  | The system must provide the ability to collect the reason for the overriding a data mask. | Non-Core. |  |
|  |  | The system must provide the ability to maintain indicators (flags) to health record users that content has been masked in accordance with users' role, and according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  | Care Support 🡪 Privacy. 🡪 **Identity Redaction.** | The system must provide the ability to manage redaction of patient identities. Identity redaction makes patient identities and conditions invisible to the public and providers who have no “need to know”. Such de-identified views must be applied to public tracking screens, common displays, and dashboards that support workflows. | Non-Core |  |
|  | Care Support 🡪 Privacy. 🡪 **Identity Protection.** | The system must enable patient identity protection. Identity protection flags a patient’s identity as confidential, indicating to providers/administrators the need to protect the identity of a patient who is at risk of harm, or who has requested anonymity. The display identifies patients at particular risk of harm during stay (e.g. due to domestic violence). | Core. |  |
|  | Care Support 🡪 Privacy. 🡪 **De-identification.** | The system must provide the ability to de-identify record entry content according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. De-identification provides patient information in which patients are de-identified and is used primarily in the population care function. A user can comply with a request (internal or external) for patient information by exporting the information in accordance with de-identification requirements (which might vary according to locale, realm, entitlement of the requestor [by law or by custom], etc). The system must invoke the relevant de-identification rules. The system must maintain an auditable record to enable a review of the who, what, why and when of a request and export. A random re-identification key may be added for re-identifying a patient if he/she is discovered, for example, to be medically at risk for any reason. | Core. |  |
|  |  | The system must provide the ability to maintain varying levels of confidentiality according to patient preferences, user role, RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law when managing de-identified views of data. | Core. |  |
|  |  | The system must provide the ability to manage a privacy policy according to patient preferences, user role, RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to control access by specified user(s) to a particular patient health record either by inclusion or exclusion according to patient preferences, user role, RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to de-identify extracted information. | Core. |  |
|  |  | The system must provide authorised users the ability to tag data for de-identification according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide authorised users the ability to transmit de-identified data to authorised recipients according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system should provide the ability to transmit a re-identification key to recipients of de-identified data according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  |  | The system must provide the ability to edit distinct patient identifiers from all reports containing data on multiple patients according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law (e.g. replace "John Smith" with "\*\*\*") | Core. |  |
|  |  | The system must make provision for use of pseudonymisation as a preferred method of de-identification. Pseudonymisation may be user or system initiated when the relevant rules are invoked by the system. | Core. |  |
|  |  | The system must create and maintain an audit trigger to track pseudonymisation of record entries. | Core. |  |
|  | Care Support 🡪 Privacy. 🡪 De-identification. 🡪 **Evidence of record entry de-identification (pseudonymisation) event.** | In order to ensure health record integrity and trust, and to enable record audits the system must keep evidence of record entry de-identification events. | Core. |  |
|  |  | The system must audit each occurrence when record entry content is de-identified. | Core. |  |
|  |  | The system must capture the identity of the organisation where record entry content is de-identified. | Core. |  |
|  |  | The system should capture the identity of the patient who is subject of de-identified record entry content without compromising access control rules (e.g. patient identity kept in the de-identification evidence log will be the relevant database record number or an internal system number, and not the patient identification number). | Core. |  |
|  |  | The system must capture the identity of the user that de-identifies the record entry content. | Core. |  |
|  |  | The system must capture the identity of the system application which de-identified record entry content. | Core. |  |
|  |  | The system must capture the type of record event trigger (i.e. de-identify through pseudonymisation). | Core. |  |
|  |  | The system must capture the date and time that record entry content is de-identified. | Core. |  |
|  |  | The system must capture identity of the location (i.e. network address) where record entry content is de-identified. | Core. |  |
|  |  | The system must capture the rationale for de-identifying record entry content. | Core. |  |
|  | Care Support 🡪 Privacy. 🡪 De-identification. 🡪 **Re-identify Record Entry.** | The system must provide the ability to re-identify a record entry from a previously aliased version of the record entry. | Core. |  |
|  |  | The system must provide the ability to re-identify (or associate original identity with) record entry content according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must invoke the relevant rules when re-identifying a record entry | Core |  |
|  |  | The system must initiate an audit trigger to track re-identification of record entries. | Core |  |
|  | Care Support 🡪 Privacy. 🡪 De-identification. 🡪 Re-identify Record Entry. 🡪 **Evidence of Record Entry Re-identification Event.** | In order to ensure health record integrity and trust, and to enable record audits the system must keep evidence of record entry re-identification events. | Core. |  |
|  |  | The system must audit each occurrence when record entry content is re-identified. | Core. |  |
|  |  | The system must capture the identity of the organisation where record entry content is re-identified. | Core. |  |
|  |  | The system should capture the identity of the patient who is subject of re-identified record entry content without compromising access control rules (e.g. patient identity kept in the re-identification evidence log will be the relevant database record number or an internal system number, and not the patient identification number). | Non-Core. |  |
|  |  | The system must capture the identity of the user re-identifying record entry content. | Core. |  |
|  |  | The system must capture the identity of the system application which re-identified record entry content. | Core. |  |
|  |  | The system must capture the type of record event trigger (i.e. re-identify). | Core. |  |
|  |  | The system must capture the date and time when record entry content is re-identified. | Core. |  |
|  |  | The system must capture the identity of the location (i.e. network address) where record entry content is re-identified. | Core. |  |
|  |  | The system must capture the rationale for re-identifying record entry content. | Core. |  |
|  | Care Support 🡪 Privacy. 🡪 **Privacy Consent Directive.** | The system must enable the patient to exercise his/her rights to permit access to personal health information and to delegate personal health information access and/or retrieval to a third party. | Core. |  |
|  |  | The system must provide the ability to manage patient consents to, or restrictions against, any access to data. | Core. |  |
|  | Care Support 🡪 **Terminology.** | The system must enable semantic interoperability by means of standard terminologies combined with a formal, standard information/terminology model. Terminology standards pertain to concepts, representations, synonyms, relationships and computable (machine-readable) definitions. Terminology services provide a common way to manage and retrieve these items. It must include historically correct version interpretation and must support legal requirements for retrospective health record information. | Core. |  |
|  | Care Support 🡪 Terminology. 🡪 **Standard Terminologies.** | The system must provide the ability to administrate the use and maintenance of terminologies according to South African government and DOD prescripts and guidelines. Types of codes include test codes, billing codes, supplier codes, diagnosis codes, stock code, item codes and procedure codes, etc. | Core. |  |
|  |  | The system must determine that clinical terms and coded clinical data exist in an approved standard terminology. | Core. |  |
|  |  | The system must provide the ability to manage terminology assets and supporting tools (internal or external to the eHealth system). | Core. |  |
|  |  | The system must provide the ability to capture information into structured data formats using approved standard terminologies without the user requiring knowledge of the terminologies used. | Core. |  |
|  |  | The system must provide the ability to enter data using content that is common to the user and allow for collection and presentation of text form data to meet the pre-determined purposes of others. Text forms should exclude cryptic or uncommon abbreviations. | Core. |  |
|  |  | The system must have the ability to present standard terminology terms in a language which is appropriate for the user. | Core. |  |
|  | Care Support 🡪 Terminology. 🡪 **Terminology Model.** | Terminology model function enables the use of a formal standard terminology model (e.g. the HL7 Reference Information Model, and ISO/EN 13606 EHR Communication). Formal standard terminology models enable common semantic representations by describing relationships between concepts within a terminology or in different terminologies. | Core. |  |
|  |  | The system must provide the ability to receive and transmit healthcare data using formal standard information models and approved standard terminologies according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to manage data using a formal standard terminology model according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to determine hierarchical inferences (e.g. subsumption across coded terminology concepts that are expressed using standard terminology models). | Core. |  |
|  |  | The system must provide the ability to manage data using a locally-defined standard terminology model, when there is no recognised-standard terminology model available. | Core. |  |
|  | Care Support 🡪 Terminology. 🡪 **Terminology Versioning.** | The system must provide the ability to manage terminology versioning. Terminology versioning enables version control of standard terminologies. It means enabling changes to terminology sets as they are periodically updated (with new codes, retired codes, and redirected codes) and cascading such changes (to clinical content in templates, custom formularies, etc) according to policy. Version control enables multiple versions of a terminology set to exist, and different versions may be concurrently used if necessary. Should the meaning of a concept change over time (which is not ideal), or a concept becomes deprecated and is replaced with a new concept, retrospective analysis/research will relate to the applicable meaning. If encoding for a concept change over time, legal health records and retrospective analysis/research can relate these different encodings to the same meaning. Complete sets of older versions of a terminology are not necessarily retained, but changes remain accessible. | Core. |  |
|  |  | The system must provide the ability to manage data using different versions of standard terminologies. | Core. |  |
|  |  | The system must provide the ability to update standard terminologies. | Core. |  |
|  |  | The system must maintain relationships among versions of a standard terminology to allow preservation of interpretation over time. | Core. |  |
|  |  | The system must provide the ability to receive and harmonise data from and transmit data to other systems that use known different versions of a terminology standard while preserving the meaning of that data. | Core. |  |
|  |  | The system must provide the ability to update terminologies to a deprecated status. | Core. |  |
|  |  | The system must provide the ability to update individual codes within a terminology to a deprecated status. | Core. |  |
|  |  | The system must provide the ability to update terms with their equivalent when terminology is changed, where coded terminology content is embedded in clinical models (e.g. templates and custom formularies), when the terminology changes can be accomplished unambiguously, and if consistent with RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to update standard terminologies used to enter clinical content (via templates, custom formularies, etc). | Core. |  |
|  |  | The system must maintain an audit log or a change history of code system to the individual code level, for versions used, dates implemented and updated to enable correct interpretation of historical data over time. | Core. |  |
|  | Care Support 🡪 Terminology. 🡪 **Terminology Mapping.** | The system must provide the ability to maintain terminology mapping. Terminology mapping maps (translates) one terminology to another for interoperability (including realm-specific interoperability requirements on local, regional, national, or international levels). The latter requirements can often be satisfied with the organisation's terminology mapping services (internal or external). An example of terminology mapping is clinical-financial mapping, which is mapping between clinical and administrative/financial terminologies and codes, which enables clinical data to support administrative and financial reporting. It enables a system to generate, or support the creation of, an invoice (account) based on health record data. Administrative and financial data can maximally be derived from clinical data, minimising the burden of processes such as reporting and claim reimbursement. | Core. |  |
|  |  | The system must provide the ability to manage data using terminology maps which may be provided by terminology mapping services (internal or external). | Core. |  |
|  |  | The system must provide the ability to update terminology maps using standard terminology services (internal or external). | Core. |  |
|  |  | The system must provide the ability to render data quality and technical quality reports for a user to determine the validity of terminology mappings. | Core. |  |
|  |  | The system must provide the ability for a user to maintain custom terminology maps where formal standard terminology maps are unavailable. | Core. |  |
|  |  | The system must provide the ability for a user to maintain custom terminology maps to formal standard terminology maps to support historical data use. | Core. |  |
|  | Care Support 🡪 **Audit.** | The system must provide the ability to track system or user-initiated activities by analysing logs based on policies or rules. For example: an administrator is enabled to audit excessive use of extraordinary (i.e. ‘break-the-glass’) access to certain patient information in the emergency department; or the system automatically audits a daily log for multiple-failed-logon-attempts. | Core. |  |
|  | Care Support 🡪 Audit.🡪 **Audit Triggers.** | The system must provide the ability to manage audit triggers. Audit triggers must be built into the system to create, in real-time, audit log entries (audit records) of key events (both routine and exceptional). That is, audit records of key events must be triggered. Key events include key metadata (who, what, when, where, and why) and relate to: the record lifecycle; system security, performance, and operations; and clinical events. Audit records (of key events) must be captured in an audit log. | Core. |  |
|  |  | The system must audit key events and child functions, according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. Key events include: record management and lifecycle events; Security events related to system and data safeguards, both routine and exceptional; System events related to performance and operations, both routine and exceptional; and Clinical events with special log requirements. | Core. |  |
|  |  | The system must capture key audit metadata at each audit trigger, and child functions, according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must capture an audit log entry at each audit trigger according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must capture the current master clock time to establish valid record date and time metadata. | Core. |  |
|  |  | The system must manage audit trigger logging using a common audit engine (e.g. using schema and transports such as specified in the Audit Log specification of IHE Audit Trails and Node Authentication (ATNA) Profile). | Core. |  |
|  | Care Support 🡪 Audit. 🡪 Audit Triggers. 🡪 **Clinical Audit Triggers.** | The system must provide the ability to manage clinical audit triggers. Clinical audit triggers track certain clinical events, which include clinical alerts, acknowledgement of clinically significant report changes; and disabling of decision support alerts. | Core. |  |
|  |  | The system must provide the capability to track all acknowledgements of clinically significant report changes. | Core. |  |
|  |  | The system must provide the ability to track when decision support alerts have been disabled. | Core. |  |
|  |  | The system must audit each occurrence of a clinical alert according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must audit each occurrence of an acknowledgement of clinically significant report changes according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must audit each occurrence when decision support alerts are disabled according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must capture identity of the organisation:   1. For each occurrence of a clinical alert. | Core. |  |
|  |  | 1. For each acknowledgement of clinically significant report changes. | Core. |  |
|  |  | 1. When decision support alerts are disabled. | Core. |  |
|  |  | The system must capture identity of the user:   1. For each occurrence of a clinical alert. | Core. |  |
|  |  | 1. For each acknowledgement of clinically significant report changes. | Core. |  |
|  |  | 1. When decision support alerts are disabled. | Core. |  |
|  |  | The system must capture identity of the system:   1. For each occurrence of a clinical alert. | Core. |  |
|  |  | 1. For each acknowledgement of clinically significant report changes. | Core. |  |
|  |  | 1. When decision support alerts are disabled. | Core. |  |
|  |  | The system must capture the event initiating the audit trigger:   1. For each occurrence of a clinical alert. | Core. |  |
|  |  | 1. For each acknowledgement of clinically significant report changes. | Core. |  |
|  |  | 1. When decision support alerts are disabled. | Core. |  |
|  |  | The system must capture the date and time of the event initiating the audit trigger:   1. For each occurrence of a clinical alert. | Core. |  |
|  |  | 1. For each acknowledgement of clinically significant report changes. | Core. |  |
|  |  | 1. When decision support alerts are disabled. | Core. |  |
|  |  | The system must capture identity of the location (i.e. network address):   1. For each occurrence of a clinical alert. | Core. |  |
|  |  | 1. For each acknowledgement of clinically significant report changes. | Core. |  |
|  |  | 1. When decision support alerts are disabled. | Core. |  |
|  |  | The system must capture the rationale for the clinical audit trigger alert:   1. For each occurrence of a clinical alert. | Core. |  |
|  |  | 1. For each acknowledgement of clinically significant report changes. | Core. |  |
|  |  | 1. When decision support alerts are disabled. | Core. |  |
|  | Care Support 🡪 Audit. 🡪 Audit Triggers. 🡪 **Security Audit Triggers.** | The system must provide the ability to manage security audit triggers. Security audit triggers track security related events, which include user authentication (start user session); prompts; user requests for password change; user logout (end user session); user access (successful); user access attempts (unsuccessful – access denied); extraordinary user access (‘break-the-glass’); and user permissions (authorisation). | Core. |  |
|  |  | The system must provide the ability to enter the reason that access control functions are being overridden. | Core. |  |
|  |  | The system must provide the ability to record system maintenance events for entry to and exit from the EHR system. | Core. |  |
|  |  | The system must audit each occurrence when security events are detected according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must capture the rationale for the event initiating the security event audit trigger. | Core. |  |
|  |  | The system must audit each occurrence of user authentication at logon (start session). | Core. |  |
|  |  | The system must capture the method of user authentication (e.g. user ID, password, biometrics, token, security question(s)) for each occurrence of user authentication at logon. | Core. |  |
|  |  | The system must audit each occurrence of user authentication when user is prompted to change password. | Core. |  |
|  |  | The system must audit each occurrence of user authentication when the user requests password change. | Core. |  |
|  |  | The system must capture the rationale for the event initiating the change password audit trigger. | Core. |  |
|  |  | The system must capture the new password in the audit log, in encrypted format, when a password change is successful | Core. |  |
|  |  | The system must audit each occurrence of user logout (end session). | Core. |  |
|  |  | The system must capture how a session ended (e.g. user logout, timeout, loss of connection, administrator logout, system failure). | Core. |  |
|  |  | The system must audit each occurrence when user access is successful. | Core. |  |
|  |  | The system must audit each occurrence when user access is unsuccessful (denied). | Core. |  |
|  |  | The system must audit each occurrence when extraordinary access is successful (e.g. "break the glass" scenario). | Core. |  |
|  |  | The system must capture the rationale for extraordinary user access. | Core. |  |
|  |  | The system must audit each occurrence when user permissions (authorisations) are granted, removed or updated. | Core. |  |
|  |  | The system must capture the rationale for granting, removing or updating user permissions. | Core. |  |
|  |  | The system must capture identity of user to whom permissions apply. | Core. |  |
|  |  | The system must capture the new set of applicable user permissions (authorisations). | Core. |  |
|  |  | The system must capture identity of the organisation:   1. When security events are detected. | Core. |  |
|  |  | 1. For each occurrence of user authentication at logon. | Core. |  |
|  |  | 1. When user is prompted to change password. | Core. |  |
|  |  | 1. When the user requests password change. | Core. |  |
|  |  | 1. For each occurrence of user logout. | Core. |  |
|  |  | 1. When user access is successful. | Core. |  |
|  |  | 1. When user access is denied. | Core. |  |
|  |  | 1. When extraordinary access is successful. | Core. |  |
|  |  | 1. When user permissions (authorisations) are granted, removed or updated. | Core. |  |
|  |  | The system must capture identity of the user:   1. When security events are detected. | Core. |  |
|  |  | 1. For each occurrence of user authentication at logon. | Core. |  |
|  |  | 1. When user is prompted to change password. | Core. |  |
|  |  | 1. When the user requests password change. | Core. |  |
|  |  | 1. For each occurrence of user logout. | Core. |  |
|  |  | 1. When user access is successful. | Core. |  |
|  |  | 1. When user access is denied. | Core. |  |
|  |  | 1. When extraordinary access is successful. | Core. |  |
|  |  | 1. When user permissions (authorisations) are granted, removed or updated. | Core. |  |
|  |  | The system must capture identity of the system:   1. When security events are detected. | Core. |  |
|  |  | 1. For each occurrence of user authentication at logon. | Core. |  |
|  |  | 1. When user is prompted to change password. | Core. |  |
|  |  | 1. When the user requests password change. | Core. |  |
|  |  | 1. For each occurrence of user logout. | Core. |  |
|  |  | 1. When user access is successful. | Core. |  |
|  |  | 1. When user access is denied. | Core. |  |
|  |  | 1. When extraordinary access is successful. | Core. |  |
|  |  | 1. When user permissions (authorisations) are granted, removed or updated. | Core. |  |
|  |  | The system must capture the event initiating audit trigger:   1. When security events are detected. | Core. |  |
|  |  | 1. For each occurrence of user authentication at logon. | Core. |  |
|  |  | 1. When user is prompted to change password. | Core. |  |
|  |  | 1. When the user requests password change. | Core. |  |
|  |  | 1. For each occurrence of user logout. | Core. |  |
|  |  | 1. When user access is successful. | Core. |  |
|  |  | 1. When user access is denied. | Core. |  |
|  |  | 1. When extraordinary access is successful. | Core. |  |
|  |  | 1. When user permissions (authorisations) are granted, removed or updated. | Core. |  |
|  |  | The system must capture the date and time of the event initiating audit trigger:   1. When security events are detected. | Core. |  |
|  |  | 1. For each occurrence of user authentication at logon. | Core. |  |
|  |  | 1. When user is prompted to change password. | Core. |  |
|  |  | 1. When the user requests password change. | Core. |  |
|  |  | 1. For each occurrence of user logout. | Core. |  |
|  |  | 1. When user access is successful. | Core. |  |
|  |  | 1. When user access is denied. | Core. |  |
|  |  | 1. When extraordinary access is successful. | Core. |  |
|  |  | 1. When user permissions (authorisations) are granted, removed or updated. | Core. |  |
|  |  | The system must capture identity of the location (i.e. network address):   1. When security events are detected. | Core. |  |
|  |  | 1. For each occurrence of user authentication at logon. | Core. |  |
|  |  | 1. When user is prompted to change password. | Core. |  |
|  |  | 1. When the user requests password change. | Core. |  |
|  |  | 1. For each occurrence of user logout. | Core. |  |
|  |  | 1. When user access is successful. | Core. |  |
|  |  | 1. When user access is denied. | Core. |  |
|  |  | 1. When extraordinary access is successful. | Core. |  |
|  |  | 1. When user permissions (authorisations) are granted, removed or updated. | Core. |  |
|  |  | The system must capture the rationale for the event initiating audit trigger:   1. When security events are detected. | Core. |  |
|  |  | 1. For each occurrence of user authentication at logon. | Core. |  |
|  |  | 1. When user is prompted to change password. | Core. |  |
|  |  | 1. When the user requests password change. | Core. |  |
|  |  | 1. For each occurrence of user logout. | Core. |  |
|  |  | 1. When user access is successful. | Core. |  |
|  |  | 1. When user access is denied. | Core. |  |
|  |  | 1. When extraordinary access is successful. | Core. |  |
|  |  | 1. When user permissions (authorisations) are granted, removed or updated. | Core. |  |
|  | Care Support 🡪 Audit. 🡪 Audit Triggers. 🡪 **Record Entry Audit Triggers.** | The system must provide the ability to manage record entry audit triggers. Record entry audit triggers track record entry-related events throughout, and at various points in, their lifecycle. | Core. |  |
|  |  | The system must link an audit log entry to each record entry according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must harmonise audit log entry metadata and corresponding record entry metadata to ensure they remain identical. | Core. |  |
|  | Care Support 🡪 Audit. 🡪 Audit Triggers. 🡪 **System Audit Triggers.** | The system must provide the ability to manage system audit triggers. System audit triggers track system events, which include system started; back-up started; back-up completed; back-up recovery started; back-up recovery completed; batch job started; batch job completed; maintenance started; maintenance completed; resource usage; system maintenance (both local access and remote access); system maintenance (software); system maintenance of codes, vocabulary, knowledge and rules, and data corruption. | Core. |  |
|  |  | The system must provide the ability to record system maintenance events for loading new versions of, or changes to, the clinical system. | Core. |  |
|  |  | The system must provide the ability to store system maintenance events for loading new versions of codes and knowledge bases. | Core. |  |
|  |  | The system must provide the ability to record system maintenance events for creating and restoring of backup. | Core. |  |
|  |  | The system must provide the ability to audit events in the case of detection of corrupt or dirty data. | Core. |  |
|  |  | The system must provide audit capabilities for recording access and usage of systems, data, and organisational resources. | Core. |  |
|  |  | The system must provide audit capabilities to capture system events at the hardware and software architecture level. | Core. |  |
|  |  | The system must provide the ability to record system maintenance events for entry to and exit from the EHR system. | Core. |  |
|  |  | The system must provide the ability to record system maintenance events for remote access connections including those for system support and maintenance activities for security and access purposes. | Core. |  |
|  |  | The system must audit each occurrence when system events are detected according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must capture identity of the organisation for each occurrence when system events are detected. | Core. |  |
|  |  | The system must capture the identity of the user for each occurrence when system events are detected. | Core. |  |
|  |  | The system must capture the identity of the system for each occurrence when system events are detected. | Core. |  |
|  |  | The system must capture the event initiating audit trigger for each occurrence when system events are detected. | Core. |  |
|  |  | The system must capture the date and time of the event initiating audit trigger for each occurrence when system events are detected. | Core. |  |
|  |  | The system must capture the identity of the location (i.e. network address) for each occurrence when system events are detected. | Core. |  |
|  |  | The system must capture the rationale for the event initiating audit trigger for each occurrence when system events are detected. | Core. |  |
|  |  | The system must audit each occurrence when the system started. | Core. |  |
|  |  | The system must capture the identity of the organisation for each occurrence when the system started. | Core. |  |
|  |  | The system must capture the identity of the user for each occurrence when the system started. | Core. |  |
|  |  | The system must capture the identity of the system for each occurrence when the system started. | Core. |  |
|  |  | The system must capture the event initiating audit trigger for each occurrence when the system started. | Core. |  |
|  |  | The system must capture the date and time of the event initiating audit trigger for each occurrence when the system started. | Core. |  |
|  |  | The system must capture the identity of the location (i.e. network address) for each occurrence when the system started. | Core. |  |
|  |  | The system must audit each occurrence when database backup is initiated. | Core. |  |
|  |  | The system must capture the identity of the organisation for each occurrence when database backup is initiated. | Core. |  |
|  |  | The system must capture the identity of the user for each occurrence when database backup is initiated. | Core. |  |
|  |  | The system must capture the identity of the system for each occurrence when database backup is initiated. | Core. |  |
|  |  | The system must capture the event initiating audit trigger for each occurrence when database backup is initiated. | Core. |  |
|  |  | The system must capture the date and time of the event initiating audit trigger for each occurrence when database backup is initiated. | Core. |  |
|  |  | The system must capture the identity of the location (i.e. network address) for each occurrence when database backup is initiated. | Core. |  |
|  |  | The system must audit each occurrence when database backup is completed. | Core. |  |
|  |  | The system must capture the identity of the organisation for each occurrence when database backup is completed. | Core. |  |
|  |  | The system must capture the identity of the user for each occurrence when database backup is completed. | Core. |  |
|  |  | The system must capture the identity of the system for each occurrence when database backup is completed. | Core. |  |
|  |  | The system must capture the event initiating audit trigger for each occurrence when database backup is completed. | Core. |  |
|  |  | The system must capture the date and time of the event initiating audit trigger for each occurrence when database backup is completed. | Core. |  |
|  |  | The system must capture identity of the location (i.e. network address) for each occurrence when database backup is completed. | Core. |  |
|  |  | The system must capture backup success or failure for each occurrence when database backup is completed. | Core. |  |
|  |  | The system must audit each occurrence when database recovery is initiated. | Core. |  |
|  |  | The system must capture the identity of the organisation for each occurrence when database recovery is initiated. | Core. |  |
|  |  | The system must capture the identity of the user for each occurrence when database recovery is initiated. | Core. |  |
|  |  | The system must capture the identity of the system for each occurrence when database recovery is initiated. | Core. |  |
|  |  | The system must capture the event initiating audit trigger for each occurrence when database recovery is initiated. | Core. |  |
|  |  | The system must capture the date and time of the event initiating audit trigger for each occurrence when database recovery is initiated. | Core. |  |
|  |  | The system must capture identity of the location (i.e. network address) for each occurrence when database recovery is initiated. | Core. |  |
|  |  | The system must audit each occurrence when database recovery is completed. | Core. |  |
|  |  | The system must capture the identity of the organisation for each occurrence when database recovery is completed. | Core. |  |
|  |  | The system must capture the identity of the user for each occurrence when database recovery is completed. | Core. |  |
|  |  | The system must capture the identity of the system for each occurrence when database recovery is completed. | Core. |  |
|  |  | The system must capture the event initiating audit trigger for each occurrence when database recovery is completed. | Core. |  |
|  |  | The system must capture the date and time of the event initiating audit trigger for each occurrence when database recovery is completed. | Core. |  |
|  |  | The system must capture identity of the location (i.e. network address) for each occurrence when database recovery is completed. | Core. |  |
|  |  | The system must capture backup recovery success or failure for each occurrence when database recovery is completed. | Core. |  |
|  |  | The system must audit each occurrence when a batch job is initiated. | Core. |  |
|  |  | The system must capture the identity of the organisation for each occurrence when a batch job is initiated. | Core. |  |
|  |  | The system must capture the identity of the user for each occurrence when a batch job is initiated. | Core. |  |
|  |  | The system must capture the identity of the system for each occurrence when a batch job is initiated. | Core. |  |
|  |  | The system must capture the event initiating audit trigger for each occurrence when a batch job is initiated. | Core. |  |
|  |  | The system must capture the date and time of the event initiating audit trigger for each occurrence when a batch job is initiated. | Core. |  |
|  |  | The system must capture identity of the location (i.e. network address) for each occurrence when a batch job is initiated. | Core. |  |
|  |  | The system must audit each occurrence when a batch job is completed. | Core. |  |
|  |  | The system must capture the identity of the organisation for each occurrence when a batch job is completed. | Core. |  |
|  |  | The system must capture the identity of the user for each occurrence when a batch job is completed. | Core. |  |
|  |  | The system must capture the identity of the system for each occurrence when a batch job is completed. | Core. |  |
|  |  | The system must capture the event initiating audit trigger for each occurrence when a batch job is completed. | Core. |  |
|  |  | The system must capture the date and time of the event initiating audit trigger for each occurrence when a batch job is completed. | Core. |  |
|  |  | The system must capture identity of the location (i.e. network address) for each occurrence when a batch job is completed. | Core. |  |
|  |  | The system must audit each occurrence when maintenance is initiated, including down time. | Core. |  |
|  |  | The system must capture the identity of the organisation for each occurrence when maintenance is initiated, including down time. | Core. |  |
|  |  | The system must capture the identity of the user for each occurrence when maintenance is initiated, including down time. | Core. |  |
|  |  | The system must capture the identity of the system for each occurrence when maintenance is initiated, including down time. | Core. |  |
|  |  | The system must capture the event initiating audit trigger for each occurrence when maintenance is initiated, including down time. | Core. |  |
|  |  | The system must capture the date and time of the event initiating audit trigger for each occurrence when maintenance is initiated, including down time. | Core. |  |
|  |  | The system must capture identity of the location (i.e. network address) for each occurrence when maintenance is initiated, including down time. | Core. |  |
|  |  | The system must audit each occurrence when maintenance is completed, including restart from down time. | Core. |  |
|  |  | The system must capture the identity of the organisation for each occurrence when maintenance is completed, including restart from down time. | Core. |  |
|  |  | The system must capture identity of the user for each occurrence when maintenance is completed, including restart from down time. | Core. |  |
|  |  | The system must capture identity of the system for each occurrence when maintenance is completed, including restart from down time. | Core. |  |
|  |  | The system must capture the event initiating audit trigger for each occurrence when maintenance is completed, including restart from down time. | Core. |  |
|  |  | The system must capture the date and time of the event initiating audit trigger for each occurrence when maintenance is completed, including restart from down time. | Core. |  |
|  |  | The system must capture identity of the location (i.e. network address) for each occurrence when maintenance is completed, including restart from down time. | Core. |  |
|  |  | The system must audit usage of system resources (access, computational, storage, network) according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must capture the identity of the organisation for usage of system resources (access, computational, storage, network). | Core. |  |
|  |  | The system must capture the identity of the user for usage of system resources (access, computational, storage, network). | Core. |  |
|  |  | The system must capture the identity of the system for usage of system resources (access, computational, storage, network). | Core. |  |
|  |  | The system must capture the event initiating audit trigger for usage of system resources (access, computational, storage, network). | Core. |  |
|  |  | The system must capture the date and time of the event initiating audit trigger for usage of system resources (access, computational, storage, network). | Core. |  |
|  |  | The system must capture identity of the location (i.e. network address) for usage of system resources (access, computational, storage, network). | Core. |  |
|  |  | The system must audit each occurrence of a system maintenance event with local access. | Core. |  |
|  |  | The system must capture the identity of the organisation for each occurrence of a system maintenance event with local access. | Core. |  |
|  |  | The system must capture the identity of the user for each occurrence of a system maintenance event with local access. | Core. |  |
|  |  | The system must capture the identity of the system for each occurrence of a system maintenance event with local access. | Core. |  |
|  |  | The system must capture the event initiating audit trigger for each occurrence of a system maintenance event with local access. | Core. |  |
|  |  | The system must capture the date and time of the event initiating audit trigger for each occurrence of a system maintenance event with local access. | Core. |  |
|  |  | The system must capture identity of the location (i.e. network address) for each occurrence of a system maintenance event with local access. | Core. |  |
|  |  | The system must audit each occurrence of a system maintenance event with remote access. | Core. |  |
|  |  | The system must capture the identity of the organisation for each occurrence of a system maintenance event with remote access. | Core. |  |
|  |  | The system must capture the identity of the user for each occurrence of a system maintenance event with remote access. | Core. |  |
|  |  | The system must capture the identity of the system for each occurrence of a system maintenance event with remote access. | Core. |  |
|  |  | The system must capture the event initiating audit trigger for each occurrence of a system maintenance event with remote access. | Core. |  |
|  |  | The system must capture the date and time of the event initiating audit trigger for each occurrence of a system maintenance event with remote access. | Core. |  |
|  |  | The system must capture identity of the location (i.e. network address) for each occurrence of a system maintenance event with remote access. | Core. |  |
|  |  | The system must audit each occurrence of a system maintenance event when EHR or clinical software is updated or reconfigured. | Core. |  |
|  |  | The system must capture the identity of the organisation for each occurrence of a system maintenance event when EHR or clinical software is updated or reconfigured. | Core. |  |
|  |  | The system must capture the identity of the user for each occurrence of a system maintenance event when EHR or clinical software is updated or reconfigured. | Core. |  |
|  |  | The system must capture the identity of the system for each occurrence of a system maintenance event when EHR or clinical software is updated or reconfigured. | Core. |  |
|  |  | The system must capture the event initiating audit trigger for each occurrence of a system maintenance event when EHR or clinical software is updated or reconfigured. | Core. |  |
|  |  | The system must capture the date and time of the event initiating audit trigger for each occurrence of a system maintenance event when EHR or clinical software is updated or reconfigured. | Core. |  |
|  |  | The system must capture identity of the location (i.e. network address) for each occurrence of a system maintenance event when EHR or clinical software is updated or reconfigured. | Core. |  |
|  |  | The system must audit each occurrence of a system maintenance event when codes, classification schemes, knowledge bases, clinical or business practice rules are updated or re-configured. | Core. |  |
|  |  | The system must capture the identity of the organisation for each occurrence of a system maintenance event when codes, classification schemes, knowledge bases, clinical or business practice rules are updated or re-configured. | Core. |  |
|  |  | The system must capture the identity of the user for each occurrence of a system maintenance event when codes, classification schemes, knowledge bases, clinical or business practice rules are updated or re-configured. | Core. |  |
|  |  | The system must capture the identity of the system for each occurrence of a system maintenance event when codes, classification schemes, knowledge bases, clinical or business practice rules are updated or re-configured. | Core. |  |
|  |  | The system must capture the event initiating audit trigger for each occurrence of a system maintenance event when codes, classification schemes, knowledge bases, clinical or business practice rules are updated or re-configured. | Core. |  |
|  |  | The system must capture the date and time of the event initiating audit trigger for each occurrence of a system maintenance event when codes, classification schemes, knowledge bases, clinical or business practice rules are updated or re-configured. | Core. |  |
|  |  | The system must capture identity of the location (i.e. network address) for each occurrence of a system maintenance event when codes, classification schemes, knowledge bases, clinical or business practice rules are updated or re-configured. | Core. |  |
|  |  | The system must audit each occurrence or detection of data corruption. | Core. |  |
|  |  | The system must capture the identity of the organisation for each occurrence or detection of data corruption. | Core. |  |
|  |  | The system must capture the identity of the user for each occurrence or detection of data corruption. | Core. |  |
|  |  | The system must capture the identity of the system for each occurrence or detection of data corruption. | Core. |  |
|  |  | The system must capture the event initiating audit trigger for each occurrence or detection of data corruption. | Core. |  |
|  |  | The system must capture the date and time of the event initiating audit trigger for each occurrence or detection of data corruption. | Core. |  |
|  |  | The system must capture identity of the location (i.e. network address) for each occurrence or detection of data corruption. | Core. |  |
|  | Care Support 🡪 Audit. 🡪 **Audit Log.** | The system must provide the ability to maintain an audit log. An audit log is a chronological sequence of audit records. Each audit record (audit log entry) contains data about a single, specific event, and includes key metadata. Audit log entries must be created by audit triggers and must be maintained in persistent and indelible form according to RSA industry standards, scope of practice, policy and legislation. | Core. |  |
|  |  | The system must provide the ability to capture audit log entries using a standards-based audit record format according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law (e.g. Internet Engineering Task Force (IETF) Request for Comments (RFC) 3881 "Internet Engineering Task Force, Request for Comment, Security Audit and Access Accountability Message XML Data Definitions for Healthcare Applications"). | Core. |  |
|  |  | The system must provide the ability to annotate or tag previously recorded audit log entries. | Core. |  |
|  |  | The system must provide the ability to securely store audit log entries metadata including related metadata. | Core. |  |
|  |  | The system must provide the ability to log access to audit log entries, and/or metadata. | Core. |  |
|  |  | The system must manage each audit log entry as a persistent, indelible (unalterable) data object including all metadata. | Core. |  |
|  | Care Support 🡪 Audit. 🡪 **Audit Review and Notification.** | The system must provide the ability to manage audit review and notifications. Audit review and notification must provide various methods of routine log review and critical event notification. | Core. |  |
|  |  | The system must provide the ability to render a report based on audit log entries. | Core. |  |
|  |  | The system must provide the capability to generate reports based on ranges of system date and time that audit log entries were captured. | Core. |  |
|  |  | The system must provide the ability to render audit log entry time stamps using Universal Coordinated Time (UTC) (based on ISO 8601). | Core. |  |
|  |  | The system must allow emergency access log entry review based on criteria such as individual assignment or specified role, reasons, patient information/record entries according to organisational policy, and/or jurisdictional law. | Core. |  |
|  | Care Support 🡪 Audit. 🡪 **Audit Trail.** | The system must provide the ability to manage audit trails. An audit trail is a collection of audit records from one or more audit logs relating to a specific topic, patient, or EHR. | Core. |  |
|  | Care Support 🡪 **Record Lifecycle and Lifespan.** | The system must provide the ability to manage record lifecycle and lifespan. | Core. |  |
|  | Care Support 🡪 Record Lifecycle and Lifespan. 🡪 **Record Lifecycle.** | The system must provide the ability to manage record lifecycles. | Core. |  |
|  | Care Support 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 **Originate and Retain Record Entry.** | The system must provide the ability to create and maintain a record entry. A record entry is typically created during the course of an action itself, to document the action and the context. A record entry is persistent evidence that an action occurred, and it includes an identified author or source that is responsible for the record. Record entry content contains metadata about the action and its circumstances, e.g. who, what, when, where, facts, findings, observations, etc. An audit trigger must be initiated to track record entry creation and maintenance. | Core. |  |
|  |  | The system must provide the ability to capture (originate) a record entry instance corresponding to an action instance and context. | Core. |  |
|  |  | The system must capture a unique instance identifier for each record entry. | Core. |  |
|  |  | The system must capture the signature event (e.g. electronic signature) of the origination entry author, and bind the signature to record entry content. The provider signature must be next to his/her initials and surname in block letters. | Core. |  |
|  |  | The system must provide the ability to capture both structured and unstructured content in record entries. | Core. |  |
|  |  | The system must provide the ability to capture record entries from information recorded during system downtime. | Core. |  |
|  |  | The system must provide the ability to integrate record entries from information recorded during system downtime. | Core. |  |
|  |  | The system must provide the ability to capture the date/time an action was taken, or data was collected if different than date/time of the record entry. | Core. |  |
|  |  | The system must capture metadata that identifies the source of non-originated record entry (e.g. templated, copied, duplicated, or boilerplate information). | Core. |  |
|  |  | The system must provide the ability to tag unstructured record entry content to organise it according to need, for example, in a time-related fashion or by application-specific groups (such as photographs, handwritten notes, or auditory sounds), or by order of relative importance. | Core. |  |
|  |  | The system must capture and maintain a record entry encoded as a standards-based data object (e.g. HL7 Continuity of Care, other HL7 CDA R2 Document). | Core. |  |
|  | Care Support 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 Originate and Retain Record Entry. 🡪 **Evidence of Record Entry Originate/Retain Event.** | The system must provide the ability to maintain evidence of record entry originate/retain event. | Core. |  |
|  |  | The system must audit each occurrence when a record entry is originated and retained. | Core. |  |
|  |  | The system must capture the identity of the organisation where record entry content is originated. | Core. |  |
|  |  | The system must capture the identity of the patient who is subject of record entry content. | Core. |  |
|  |  | The system must capture the identity of the individual(s) who performed the action documented in record entry content. | Core. |  |
|  |  | The system must capture the identity of the user who entered/authored record entry content. | Core. |  |
|  |  | The system must capture the identity of the system application which originated record entry content. | Core. |  |
|  |  | The system must capture the identity of the device when the source of record entry content is a device. | Core. |  |
|  |  | The system must capture the action as evidenced by record entry content. | Core. |  |
|  |  | The system must capture the type of record event trigger (i.e. originate/retain). | Core. |  |
|  |  | The system must capture the date and time of action occurrence as evidenced by record entry content. | Core. |  |
|  |  | The system must capture the date and time record entry content is originated. | Core. |  |
|  |  | The system must capture the duration of the action evidenced by record entry content. | Core. |  |
|  |  | The system must capture the physical location of the action evidenced by record entry content. | Core. |  |
|  |  | The system must capture identity of the location (i.e. network address) where record entry content is originated. | Core. |  |
|  |  | The system must capture the rationale for the action evidenced by record entry content. | Core. |  |
|  |  | The system must capture the rationale for originating record entry content. | Core. |  |
|  |  | The system must capture the source of content in cases where the record entry content includes templates (boilerplate information) or copied (duplicated) information. | Core. |  |
|  | Care Support 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 **Amend Record Entry Content.** | The system must provide the ability to amend record entry content. Content of a record entry is typically amended upon conclusion of an action, or to correct, update and complete it. After amendment, the system is responsible for retention of the record entry and its revision history. An audit trigger must be initiated to track record entry amendment. | Core. |  |
|  |  | The system must provide the ability to update (amend) record entry content. | Core. |  |
|  |  | The system must maintain the original and all previously amended versions of the record entry, retaining each version instance without alteration. | Core. |  |
|  |  | The system must capture a new uniquely identifiable version of the record entry, incorporating amended content. | Core. |  |
|  |  | The system must capture the signature event (e.g. electronic signature) of the amendment author, binding signature to record entry content. | Core. |  |
|  |  | The system must provide the ability to specify the reason for an amendment or error correction on a record. | Core. |  |
|  | Care Support 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 Amend Record Entry Content. 🡪 **Evidence of Record Entry Content Amendment Event.** | The system must provide the ability to maintain evidence of record entry amendment events to ensure health record integrity and trust and to enable record audits. | Core. |  |
|  |  | The system must audit each occurrence when a record entry is amended. | Core. |  |
|  |  | The system must capture identity of the organisation where record entry content is amended. | Core. |  |
|  |  | The system must capture identity of the patient who is subject of amended record entry content. | Core. |  |
|  |  | The system must capture identity of the user who entered/authored record entry content amendment. | Core. |  |
|  |  | The system must capture identity of the system application which amended record entry content. | Core. |  |
|  |  | The system must capture the type of record event trigger (i.e. amendment). | Core. |  |
|  |  | The system must capture the date and time record entry content is amended. | Core. |  |
|  |  | The system must capture identity of the location (i.e. network address) where record entry content is amended. | Core. |  |
|  |  | The system must capture the rationale for amending record entry content. | Core. |  |
|  |  | The system must capture a sequence identifier for amended record entry content. | Core. |  |
|  |  | The system must capture a reference (e.g. link, pointer) to pre-amendment data for each amended record entry. | Core. |  |
|  | Care Support 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 **Translate Record Entry Content.** | The system must provide the ability to translate record entry content. Translation of record entry content includes:   1. to translate coded data from one coding or classification scheme to another. 2. to translate record entry content from one human language to another   Translated (amended) record entry content is the responsibility of translating system – which invokes mapping/translation rules for each relevant record attribute.  The translation amendment must become part of the record entry revision history, where original content and any previous amendments are retained without alteration.  After translation amendment, the system is responsible for retention of the record entry and its revision history (including the translation event).  An audit trigger must be initiated to track record entry translation. | Core. |  |
|  |  | The system must provide the ability to render coded record entry content translated from one coding/classification system to another. | Core. |  |
|  |  | The system must provide the ability to render coded record entry content translated from one value set to another. | Core. |  |
|  |  | The system must provide the ability to render record entry content translated from one human language to another. | Core. |  |
|  |  | The system must maintain the original and all previously amended versions of the record entry, retaining each version instance without alteration. | Core. |  |
|  |  | The system should capture a new uniquely identifiable version of the record entry, incorporating translated content. | Non-Core. |  |
|  | Care Support 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 Translate Record Entry Content. 🡪 **Evidence of Record Entry Content Translate Event.** | The system must provide the ability to keep evidence of record entry translation events to ensure health record integrity and to enable record audits. | Core. |  |
|  |  | The system must audit each occurrence when record entry content is translated. | Core. |  |
|  |  | The system must capture the identity of the organisation where record entry content is translated. | Core. |  |
|  |  | The system must capture the identity of the patient who is subject of translated record entry content. | Core. |  |
|  |  | The system must capture the identity of the user initiating record entry content translation when record entry content translation is initiated by the user. | Core. |  |
|  |  | The system must capture the identity of the system application which translated the record entry content. | Core. |  |
|  |  | The system must capture the type of record event trigger (i.e. translation). | Core. |  |
|  |  | The system must capture the date and time that record entry content is translated. | Core. |  |
|  |  | The system must capture the identity of the location (i.e. network address) where record entry content is translated. | Core. |  |
|  |  | The system must capture the rationale for translating record entry content when record entry translation is initiated by the user. | Core. |  |
|  |  | The system must capture a sequence identifier for translated record entry content. | Core. |  |
|  |  | The system must capture the identifier and version of translation tools used for each translated record entry. | Core. |  |
|  |  | The system must capture a reference (e.g. link or pointer) to pre-translation data for each record entry translation. | Core. |  |
|  | Care Support 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 **Attest Record Entry Content.** | The system must provide the ability to attest record entry content through electronic signature.  Record entry content is attested for accuracy, completeness and to assign responsibility for an act, event, condition, opinion, or diagnosis.  Attested record entry content is the responsibility of attesting author. The attesting author may be someone other than the originating Author, i.e. a supervisor, proctor, preceptor or other designated individual.  An audit trigger must be initiated to track record entry attestation.  Every record entry must be identified with the author and should not be made or signed by someone other than the author unless they have authority to do so. For example, a resident may author record entry content but the person taking legal authority for the content is the “attester” – both individuals must be identified. (Note that A transcriptionist may transcribe an author's notes and a senior clinician may attest to the accuracy of another's statement of events.)  Definitions:   1. Author/originating author. All users who create or contribute content and have a role in the development of a record entry. Some entries may be created by an author whose role is a student, transcriber or scribe. 2. Attester/attesting author. A user who takes legal authority for record entry content. The attester is often the same as the author, but they may also be an individual with authority to take responsibility for record entry content created in whole or in part by another author(s). | Core. |  |
|  |  | The system must provide the ability to attest (approve and apply electronic signature to) record entry content by the author. | Core. |  |
|  |  | The system must capture the signature event (e.g. electronic signature) of the attesting author, and bind the signature to the record entry content | Core. |  |
|  |  | The system must provide the ability to maintain any attestable record entry content added or changed with the content's (originating) author. | Core. |  |
|  |  | The system must present the status of attestable record entry content which has not been attested (record pending state). | Core. |  |
|  |  | The system must provide the ability to maintain record entry content by properly authenticated and authorised users different from the author (e.g. counter-electronic signature), according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law, when the attester/attesting author is different than the originating author (s). | Core. |  |
|  |  | The system must provide the ability to manage electronic signatures as the means for attestation. | Core. |  |
|  |  | The system must provide the ability to maintain all authors/contributors associated with their content if more than one author contributes to the record entry content. | Core. |  |
|  |  | The system must maintain and display the author(s) and the attester if record entry content is attested by someone other than the author. | Core. |  |
|  |  | The system must provide the ability to define and present a minimum data set of author information to be displayed with record entry content or as outputs according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law (e.g. name, credential, and/or position such as K. Smith, RN). | Core. |  |
|  |  | The system must capture the signature type (e.g. electronic signature) of the entity (individual, EHR or other system, or organisation) sending record entry content. | Core. |  |
|  |  | The system must capture the signature type (e.g. electronic signature) of the entity (individual, EHR or other system, or organisation) receiving record entry content. | Core. |  |
|  |  | The system must capture all signature types of the entities through which record entry content has passed. | Core. |  |
|  | Care Support 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 Attest Record Entry Content. 🡪 **Evidence of Record Entry Content Attestation Event.** | The system must provide the ability to maintain evidence of record entry attestation events to ensure health record integrity and trust and to enable record audits. | Core. |  |
|  |  | The system must audit each occurrence of record entry attestation (signature event). | Core. |  |
|  |  | The system must capture the identity of the organisation where record entry content attestation (signature event) occurred. | Core. |  |
|  |  | The system must capture the identity of the patient who is subject of attested record entry content. | Core. |  |
|  |  | The system must capture the identity of the user attesting to record entry content (signature event). | Core. |  |
|  |  | The system must capture the identity of the system application in which record entry content attestation (signature event) occurred. | Core. |  |
|  |  | The system must capture the type of record event trigger (i.e. attestation/signature event).: | Core. |  |
|  |  | The system must capture the date and time of record entry content attestation (signature event). | Core. |  |
|  |  | The system must capture the identity of the location (i.e. network address) where record entry content attestation (signature event) occurred. | Core |  |
|  |  | The system must capture the data, document or other identifier for attested record entry content. | Core. |  |
|  | Care Support 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 **View/Access Record Entry Content.** | The system must provide record entry access/views ability. An audit trigger must be initiated to track record entry views/access. | Core. |  |
|  |  | The system must provide the ability to mask record entry content that may only be accessed/viewed by authorised entities. | Core. |  |
|  |  | The system must provide the ability to display record entry content, including original version and any subsequent amendments. | Core. |  |
|  |  | The system must provide the ability to display record entry content down to the separate element or item, including encoded fields. | Core. |  |
|  | Care Support 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 View/Access Record Entry Content. 🡪 **Evidence of Record Entry Content View/Access Event.** | The system must provide the ability to maintain evidence of record entry access/view events to ensure health record integrity and trust and to enable record audits. | Non-Core. |  |
|  |  | The system must audit each occurrence when record entry content is viewed/accessed. | Non-Core. |  |
|  |  | The system must capture the identity of the organisation where record entry content is viewed/accessed. | Non-Core. |  |
|  |  | The system must capture the identity of the patient who is subject of the viewed/accessed record entry content. | Non-Core. |  |
|  |  | The system must capture the identity of the user who viewed/accessed record entry content. | Non-Core. |  |
|  |  | The system must capture the identity of the system application in which record entry content is viewed/accessed. | Non-Core. |  |
|  |  | The system must capture the type of Record Event trigger (i.e. view/access). | Non-Core. |  |
|  |  | The system must capture the date and time that record entry content is viewed/accessed. | Non-Core. |  |
|  |  | The system must capture the identity of the location (i.e. network address) where record entry content is viewed/accessed. | Non-Core. |  |
|  |  | The system must capture the rationale for viewing/accessing record entry content (e.g. emergency access). | Non-Core. |  |
|  |  | The system must capture the data, document or other identifier for the viewed/accessed record entry content. | Non-Core. |  |
|  |  | The system must capture whether the data/document viewed/accessed is a primary source record (e.g. patient's record) or an aggregated report (e.g. summary report including multiple patients). | Non-Core. |  |
|  |  | The system should be able to provide a notification function for administrators in relation to accessing a confidential/ restricted record. | Non-Core. |  |
|  |  | The system should capture known and applicable permissions regarding record entry content viewed/accessed including confidentiality codes, patient consent authorisations, privacy policy pointers. | Non-Core. |  |
|  | Care Support 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 **Output/Report Record Entry Content.** | The system must provide the ability to deliver record content as reports/output. An audit trigger must be initiated to track record entry content outputs and reports. | Core. |  |
|  |  | The system must provide the ability to report/provide as output record entry content, retaining the original, unaltered content and signature bindings, action and record entry source and metadata. | Core. |  |
|  |  | The system must provide the ability to report/provide as output record entry extracts, including content, context, source and metadata. | Core. |  |
|  |  | The system must identify the patient or individual subject of reported/provided as output record entry content. | Core. |  |
|  |  | The system must report/provide as output protected record entry content if a specific recipient is known, based on established permissions and according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must transmit the corresponding authorisations and patient consent permissions if known and explicit record entry content is reported/provided as output. | Core. |  |
|  |  | The system must provide the ability to report/deliver as output updates (new versions) of record entry content to known recipients of prior versions according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  | Care Support 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 Output/Report Record Entry Content. 🡪 **Evidence of Record Entry Content Output/Report Event.** | The system must provide the ability to maintain evidence of record entry report/provided as output events to ensure health record integrity and trust and to enable record audits. | Core. |  |
|  |  | The system must audit each occurrence when an output (e.g. report, screen shot) is generated from record entry content. | Core. |  |
|  |  | The system must capture the identity of the organisation where output/report is generated from record entry content. | Core. |  |
|  |  | The system must capture the identity of the patient who is subject of the record entry(ies) populating the output/report generated. | Core. |  |
|  |  | The system must capture the identity of the user who generated the output/report of record entry content. | Core. |  |
|  |  | The system must capture the identity of the system application from which the output/report is generated. | Core. |  |
|  |  | The system must capture the type of record event trigger (i.e. output/report). | Core. |  |
|  |  | The system must capture the date and time that the output/report is generated. | Core. |  |
|  |  | The system must capture the identity of the location (i.e. network address) where the output/report is generated. | Core. |  |
|  |  | The system must capture the rationale for generating the output/report. | Core. |  |
|  |  | The system must capture the data, document, or other identifier for the output/report generated. | Core. |  |
|  |  | The system must capture when a record entry content output/report occurrence is known to be a disclosure, according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must capture known and applicable permissions regarding record entry content output/reported including confidentiality codes, patient consent authorisations, privacy policy pointers. | Core. |  |
|  | Care Support 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 **Disclose Record Entry Content.** | The system must provide the ability to disclose record entry content. An audit trigger must be initiated to track record entry content disclosures. | Core. |  |
|  |  | The system must identify the patient or individual subject of transmitted/disclosed record entry content. | Core. |  |
|  |  | The system must capture a log entry for disclosure of protected record entry content, according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must disclose protected record entry content if a specific recipient is known, based on established permissions and according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must transmit corresponding authorisations and patient consent permissions if known and explicit record entry content is being transmitted. | Core. |  |
|  |  | The system must provide the ability to extract record entry content prior to disclosure. | Core. |  |
|  |  | The system must ensure that EHR data is only disclosed to known, authenticated destinations. | Core. |  |
|  |  | The system must provide the ability to capture audit information about changes to the status of destinations. | Core. |  |
|  |  | The system must provide the ability to de-identify record entry content prior to disclosure. | Core. |  |
|  | Care Support 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 Disclose Record Entry Content. 🡪 **Evidence of Record Entry Content Disclosure Event.** | The system must provide the ability to maintain evidence of record entry disclosure events to ensure health record integrity and trust and to enable record audits. | Core. |  |
|  |  | The system must audit each occurrence when record entry content is disclosed according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must capture the identity of the organisation from which record entry content is disclosed. | Core. |  |
|  |  | The system must capture the identity of the patient who is subject of disclosed record entry content. | Core. |  |
|  |  | The system must capture the identity of the user initiating disclosure of record entry content. | Core. |  |
|  |  | The system must capture the identity of the system application from which record entry content is disclosed. | Core. |  |
|  |  | The system must capture the type of record event trigger (i.e. disclose). | Core. |  |
|  |  | The system must capture the date and time that record entry content is disclosed. | Core. |  |
|  |  | The system must capture the identity of the location (i.e. network address) where record entry content is disclosed. | Core. |  |
|  |  | The system must capture the rationale for disclosing record entry content. | Core. |  |
|  |  | The system must capture the data, document or other identifier for record entry content disclosed. | Core. |  |
|  |  | The system must capture that this is an occurrence when Record Entry content is known to be disclosed, according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must capture known and applicable permissions regarding record entry content disclosed including confidentiality codes, patient consent authorisations, privacy policy pointers. | Core. |  |
|  | Care Support 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 **Transmit Record Entry Content.** | The system must provide the ability to manage transmittal of record entry content to external entities or systems. Transmittal of record entries is the responsibility of the system – which invokes relevant rules. An audit trigger must be initiated to track record entry transmittal. | Core. |  |
|  |  | The system must provide the ability to transmit record entry content to external systems, retaining original, unaltered content and signature bindings, action and record entry source and metadata. | Core. |  |
|  |  | The system must provide the ability to transmit record entry extracts to external systems, including content, context, source and metadata. | Core. |  |
|  |  | The system must identify the patient subject of transmitted record entry content. | Core. |  |
|  |  | The system must transmit protected record entry content if a specific recipient is known, based on established permissions and according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must transmit corresponding authorisations and patient consent permissions if known and explicit as to record entry content being transmitted. | Core. |  |
|  |  | The system must provide the ability to extract record entry content prior to transmittal. | Core. |  |
|  |  | The system must provide the ability to de-identify record entry content prior to transmittal. | Core. |  |
|  |  | The system must provide the ability to transmit updates (new versions) of record entry content to known recipients of prior versions according to RSA industry standards, RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to transmit with each exchange the most recent or all versions of record entry content according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  | Care Support. 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 Transmit Record Entry Content. 🡪 **Evidence of Record Entry Transmit Event.** | The system must provide the ability to maintain evidence of record entry transmission events to ensure health record integrity and trust and to enable record audits. | Core. |  |
|  |  | The system must audit each occurrence when record entry content is transmitted. | Core. |  |
|  |  | The system must capture the identity of the organisation from which record entry content is transmitted. | Core. |  |
|  |  | The system must capture the identity of the patient who is the subject of record entry content transmitted. | Core. |  |
|  |  | The system must capture the identity of the user initiating the transmission of record entry content. | Core. |  |
|  |  | The system must capture the identity of the system application which transmitted record entry content. | Core. |  |
|  |  | The system must capture the identity of the system application which received record entry content. | Core. |  |
|  |  | The system must capture the type of record event trigger (i.e. transmit). | Core. |  |
|  |  | The system must capture the date and time the record entry content is transmitted. | Core. |  |
|  |  | The system must capture the identity of the location (i.e. network address) from which the record entry is transmitted. | Core. |  |
|  |  | The system must capture the location (network address) to which the record entry is transmitted. | Core. |  |
|  |  | The system must capture the rationale for transmitting record entry content. | Core. |  |
|  |  | The system must capture the type of record entry content transmitted (e.g. original, amended, updated data). | Core. |  |
|  |  | The system must capture the data, document or other identifier for transmitted record entry. | Core. |  |
|  |  | The system must capture when a record entry transmit occurrence is known to be a disclosure, according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must capture known and applicable permissions regarding record entry content transmitted including confidentiality codes, patient consent authorisations, privacy policy pointers. | Core. |  |
|  | Care Support. 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 **Receive and Retain Record Entries.** | The system must provide the ability to manage receipt and retention of record entries. Receipt of record entries is the responsibility of the system, which must invoke relevant rules. An audit trigger must be initiated to track record entry receipt and retention. | Core. |  |
|  |  | The system must provide the ability to capture and maintain record entry content from external systems, retaining and persisting original unaltered content and signature bindings, action and record entry source and metadata. | Core. |  |
|  |  | The system must provide the ability to capture and maintain record entry extracts from external systems, retaining and persisting source, identity, record content and metadata. | Core. |  |
|  |  | The system must identify the patient or individual subject of received record entry content. | Core. |  |
|  |  | The system must control subsequent data access to that permitted by corresponding authorisations and patient consents if authorisations and patient consents are received with record entry content. | Core. |  |
|  | Care Support. 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 Receive and Retain Record Entries. 🡪 **Evidence of Record Entry Receive/Retain Event.** | The system must provide the ability to maintain evidence or record entry receipt and retention to ensure health record integrity and trust and to enable record audits. | Core. |  |
|  |  | The system must audit each occurrence when externally-sourced record entry content is received and retained. | Core. |  |
|  |  | The system must capture the identity of the organisation transmitting record entry content received and retained. | Core. |  |
|  |  | The system must capture the identity of the organisation receiving transmitted record entry content. | Core. |  |
|  |  | The system must capture the identity of the patient who is subject of received record entry content. | Core. |  |
|  |  | The system must capture identity of the user accepting receipt of the transmitted record entry content. | Core. |  |
|  |  | The system must capture identity of the (external) system application which transmitted record entry content. | Core. |  |
|  |  | The system must capture the identity of the system application which received record entry content. | Core. |  |
|  |  | The system must capture the type of record event trigger (i.e. receive). | Core. |  |
|  |  | The system must capture the date and time the record entry content is received. | Core. |  |
|  |  | The system must capture the identity of the location (i.e. network address) where the record entry content is received. | Core. |  |
|  |  | The system must capture the rationale for accepting receipt of transmitted record entry content. | Core. |  |
|  |  | The system must capture the type of record entry content received (e.g. original, amended, updated data). | Core. |  |
|  |  | The system must capture the data, document or other identifier for the record entry received if an internal identifier is assigned to data/documents received from an external source. | Core. |  |
|  | Care Support. 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 **Archive Record Entries.** | The system must provide the ability to archive record entries. Archival of record entries may be initiated by user command or through an automated, configurable system capability. Archival of record entries is the responsibility of the system that invokes relevant rules. An audit trigger must be initiated to track record entry archival. Record entries must be archived in such a manner as to permit them to be returned to their original or similar information structures. The system must enable compliance with records retention according to RSA industry standards, scope of practice, organisational policy or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to archive and restore record entries according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law (e.g. to/from off-line or near-line media). | Core. |  |
|  |  | The system must provide the ability for an authorised user to tag and un-tag record entries to be archived. | Core. |  |
|  |  | The system must provide the ability to archive metadata that is associated with record entries that have been archived to ensure logical and semantic consistency of the information for subsequent access upon restoration. | Core. |  |
|  |  | The system must tag record entries in the online database that will be archived or retained during the archival process. | Core. |  |
|  |  | The system must provide the ability to enter a schedule for archive and restore processing. | Core. |  |
|  |  | The system must provide the ability to manage (configure) archival parameters for record entries (e.g. what and when to archive). | Core. |  |
|  | Care Support. 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 Archive Record Entries. 🡪 **Evidence of Record Entry Archive Event.** | The system must provide the ability to maintain evidence of record entry archive events to ensure health record integrity and trust and to enable record audits. | Core. |  |
|  |  | The system must audit each occurrence when record entry content is archived. | Core. |  |
|  |  | The system must capture the identity of the organisation where record entry content is archived. | Core. |  |
|  |  | The system must capture the identity of the patient who is subject of archived record entry content. | Core. |  |
|  |  | The system must capture an archive identifier for archived record entry content (e.g. nursing home inpatient stay from 3/15/2000 thru 6/10/2000). | Core. |  |
|  |  | The system must capture the identity of the user archiving record entry content. | Core. |  |
|  |  | The system must capture the identity of the system application that archived the record entry content. | Core. |  |
|  |  | The system must capture the type of record event trigger (i.e. archive). | Core. |  |
|  |  | The system must capture the date and time the record entry content is archived. | Core. |  |
|  |  | The system must capture the identity of the location (i.e. network address) to which record entry content is archived. | Core. |  |
|  |  | The system must capture the rationale for archiving record entry content. | Core. |  |
|  |  | The system must capture the set of record entry content to be archived. | Core. |  |
|  |  | The system must capture the data, document or other identifier for archived record entry content. | Core. |  |
|  |  | The system must capture the method and target media of archived record entry content. | Core. |  |
|  | Care Support. 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 **Restore Record Entries that were Previously Archived.** | The system must provide the ability to restore previously archived record entries. Restore of record entries may be initiated by user command. Restoration of record entries is the responsibility of the system that invokes relevant rules. An audit trigger must be initiated to track record entry restoration. | Core. |  |
|  |  | The system must provide the ability to restore previously archived record entries according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to restore metadata that is associated with record entries that have been restored. | Core. |  |
|  |  | The system must provide the ability to enter a target destination when restoring record entries (e.g. original data location, temporary user storage, or a research/analysis database). | Core. |  |
|  |  | The system must provide the ability to selectively restore portions of archived record entries. | Core. |  |
|  | Care Support. 🡪 Record Lifecycle and Lifespan 🡪 Record Lifecycle 🡪 Restore Record Entries that were Previously Archived 🡪 **Evidence of Record Entry Restore Event** | The system must provide the ability to maintain evidence of record entry restore events to ensure health record integrity and trust and to enable record audits. | Core. |  |
|  |  | The system must audit each occurrence when archived record entry content is restored. | Core. |  |
|  |  | The system must capture the identity of the organisation where record entry content is restored. | Core. |  |
|  |  | The system must capture the identity of the patient who is the subject of restored record entry content. | Core. |  |
|  |  | The system must capture an archive identifier for restored record entry content (e.g. nursing home inpatient stay from 3/15/2000 thru 6/10/2000). | Core. |  |
|  |  | The system must capture the identity of the user restoring record entry content. | Core. |  |
|  |  | The system must capture the identity of the system application which restored record entry content. | Core. |  |
|  |  | The system must capture the type of record event trigger (i.e. restore). | Core. |  |
|  |  | The system must capture the date and time that record entry content is restored. | Core. |  |
|  |  | The system must capture identity of the location (i.e. network address) from which record entry content is restored. | Core. |  |
|  |  | The system must capture the rationale for restoring record entry content. | Core. |  |
|  |  | The system must capture the data, document or other identifier for restored record entry content. | Core. |  |
|  | Care Support. 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 **Destroy or Identify Record Entries as Missing.** | The system must provide the ability to destroy record entries and to identify record entries as missing. Destruction of record entries typically occurs after conclusion of the legal retention period. Destruction of record entries may be initiated by user command. Destruction of record entries is the responsibility of the system that invokes relevant rules. An audit trigger must be initiated to track record entry destruction or notation as missing. (Example of missing record entries: Each prescription entry must have a related consultation entry – if no consultation entry is related to the prescription entry, it is indicated as missing). | Core. |  |
|  |  | The system must provide the ability to delete (destroy) record entries (e.g. those exceeding their legal retention period) according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to tag record entries as missing. | Core. |  |
|  | Care Support. 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 Destroy or Identify Record Entries as Missing. 🡪 **Evidence of Record Entry Destroy Event.** | The system must provide the ability to maintain evidence of record entry destruction events to ensure health record integrity and trust and to enable record audits. | Core. |  |
|  |  | The system must audit each occurrence when record entry content is destroyed according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must capture the identity of the organisation where record entry content is destroyed. | Core. |  |
|  |  | The system must capture the identity of the patient who is subject of destroyed record entry content. | Core. |  |
|  |  | The system must capture a destruction identifier for destroyed record entry content (e.g. nursing home inpatient stay from 3/15/2000 thru 6/10/2000). | Core. |  |
|  |  | The system must capture the identity of the user destroying record entry content. | Core. |  |
|  |  | The system must capture the identity of the system application which destroyed record entry content. | Core. |  |
|  |  | The system must capture the type of record event trigger (i.e. destroy). | Core. |  |
|  |  | The system must capture the date and time that record entry content is destroyed. | Core. |  |
|  |  | The system must capture the identity of the location (i.e. network address) where record entry content is destroyed. | Core. |  |
|  |  | The system must capture the rationale for destroying record entry content. | Core. |  |
|  |  | The system must capture the data, document or other identifier for destroyed record entry content. | Core. |  |
|  | Care Support. 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 **Deprecate/Retract Record Entries.** | The system must provide the ability to deprecate/retract record entries as invalid. Deprecation of record entries occurs when record entries are found to be improperly identified or otherwise invalid. Deprecation of record entries may be initiated by user command. Deprecation of record entries is the responsibility of the system that invokes relevant rules. An audit trigger must be initiated to track record entry deprecation. | Core. |  |
|  |  | The system must provide the ability to deprecate/retract record entries as invalid according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  | Care Support. 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 Deprecate/Retract Record Entries. 🡪 **Evidence of Record Entry Deprecate/Retract Event.** | The system must provide the ability to maintain evidence of record entry deprecation/retraction events to ensure health record integrity and trust and to enable record audits. | Core. |  |
|  |  | The system must audit each occurrence when record entry content is deprecated/retracted. | Core. |  |
|  |  | The system must capture the identity of the organisation where record entry content is deprecated/retracted. | Core. |  |
|  |  | The system must capture the identity of the patient who is subject of deprecated/retracted record entry content. | Core. |  |
|  |  | The system must capture identity of the user deprecating/retracting record entry content. | Core. |  |
|  |  | The system must capture the identity of the system application which deprecated/retracted record entry content. | Core. |  |
|  |  | The system must capture the type of record event trigger (i.e. deprecate/retract). | Core. |  |
|  |  | The system must capture the date and time the record entry content is deprecated/retracted. | Core. |  |
|  |  | The system must capture the identity of the location (i.e. network address) where record entry content is deprecated/retracted. | Core. |  |
|  |  | The system must capture the rationale for deprecating/retracting record entry content. | Core. |  |
|  | Care Support. 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 **Re-activate Record Entries.** | The system must provide the ability to manage re-activation of record entries. Record entry re-activation occurs when record entries are made active again after previously destroyed or deprecated. Re-activation of record entries may be initiated by user command. Re-activation of record entries is the responsibility of the system that invokes relevant rules. An audit trigger must be initiated to track record entry re-activation. | Core. |  |
|  |  | The system must provide the ability to re-activate (previously deleted or deprecated) record entries according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  | Care Support. 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 Re-activate Record Entries. 🡪 **Evidence of Record Entry Re-Activation Event.** | The system must provide the ability to maintain evidence of record entry re-activation events to ensure health record integrity and trust and to enable record audits. | Core. |  |
|  |  | The system must audit each occurrence when destroyed or deprecated record entry content is re-activated. | Core. |  |
|  |  | The system must capture the identity of the organisation where record entry content is reactivated. | Core. |  |
|  |  | The system must capture the identity of the patient who is subject of reactivated record entry content. | Core. |  |
|  |  | The system must capture the identity of the user reactivating record entry content. | Core. |  |
|  |  | The system must capture the identity of the system application which re-activated record entry content. | Core. |  |
|  |  | The system must capture the type of record event trigger (i.e. re-activate). | Core. |  |
|  |  | The system must capture the date and time that record entry content is re-activated. | Core. |  |
|  |  | The system must capture the identity of the location (i.e. network address) where record entry content is re-activated. | Core. |  |
|  |  | The system must capture the rationale for re-activating record entry content. | Core. |  |
|  | Care Support. 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 **Merge Record Entries.** | The system must provide the ability to merge record entries. Entries may be merged if duplicate patient records are found. | Core. |  |
|  |  | The system must provide the ability to logically merge patient record entries according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  | Care Support. 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 Merge Record Entries. 🡪 **Evidence of Record Entry Merge Event.** | The system must provide the ability to maintain evidence of record entry merge events to ensure health record integrity and trust and to enable record audits. | Core. |  |
|  |  | The system must audit each occurrence when record entries are merged (e.g. same patient, multiple sets of record entries). | Core. |  |
|  |  | The system must capture the identity of the organisation where record entries are merged. | Core. |  |
|  |  | The system must capture the identity of the patient who is subject of merged record entries. | Core. |  |
|  |  | The system must capture the identifier for the source set of record entries. | Core. |  |
|  |  | The system must capture the identifier for the target set of record entries. | Core. |  |
|  |  | The system must capture the identity of the user merging record entries. | Core. |  |
|  |  | The system must capture the identity of the system application which merged record entries. | Core. |  |
|  |  | The system must capture the type of record event trigger (i.e. merge). | Core. |  |
|  |  | The system must capture the date and time that record entries are merged. | Core. |  |
|  |  | The system must capture the identity of the location (i.e. network address) where record entries are merged. | Core. |  |
|  |  | The system must capture the rationale for merging record entries. | Core. |  |
|  |  | The system must capture the data, document or other identifier for merged record entries. | Core. |  |
|  | Care Support. 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 **Unmerge Record Entries.** | The system must provide the ability to manage unmerge events of previously merged record entries. | Core. |  |
|  |  | The system must provide the ability to unmerge multiple patient record entries according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  | Care Support. 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 Unmerge Record Entries. 🡪 **Evidence of Record Entry Unmerge Event.** | The system must provide the ability to maintain evidence of unmerge events of previously merged record entries to ensure health record integrity and trust and to enable record audits. | Core. |  |
|  |  | The system must audit each occurrence when merged record entries are unmerged. | Core. |  |
|  |  | The system must capture the identity of the organisation where record entries are unmerged. | Core. |  |
|  |  | The system must capture the identity of the patient who is subject of unmerged record entries. | Core. |  |
|  |  | The system must capture the identifier for the source set of record entries. | Core. |  |
|  |  | The system must capture the identifier for the target set of record entries. | Core. |  |
|  |  | The system must capture the identity of the user unmerging record entries. | Core. |  |
|  |  | The system must capture the identity of the system application which unmerged record entries. | Core. |  |
|  |  | The system must capture the type of record event trigger (i.e. unmerge). | Core. |  |
|  |  | The system must capture the date and time that record entries are unmerged. | Core. |  |
|  |  | The system must capture the identity of the location (i.e. network address) where record entries are unmerged. | Core. |  |
|  |  | The system must capture the rationale for unmerging record entries. | Core. |  |
|  |  | The system must capture the data, document or other identifier for unmerged record entries. | Core. |  |
|  | Care Support. 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 **Link Record Entries.** | The system must provide the ability to link record entries. Record entries may be linked for:   1. A single encounter (patient visit). 2. An episode of care (patient problem). 3. A selected population cohort. | Core. |  |
|  |  | The system must provide the ability to logically link patient record entries according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to define and label relationships between individual or groups of health record entries. | Core. |  |
|  |  | The system must provide the ability to link one or more health record entries that are connected through changes in the life-cycle status of an activity or plan (e.g. if a scheduled activity is later cancelled). | Core. |  |
|  |  | The system must be able to link a pre-existing health record entry to a newer entry that amplifies or explains, challenges or endorses that health record entry (but does not replace the pre-existing entry). | Core. |  |
|  | Care Support. 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 Link Record Entries. 🡪 **Evidence of Record Entry Link Event.** | The system must provide the ability to maintain evidence of record entry link events to ensure health record integrity and trust and to enable record audits. | Core. |  |
|  |  | The system must audit each occurrence when record entries are linked to another entry/object (e.g. Record entries in an external system). | Core. |  |
|  |  | The system must capture the identity of the organisation where record entries are linked. | Core. |  |
|  |  | The system must capture the identity of the patient who is subject of linked record entries. | Core. |  |
|  |  | The system must capture the identity of the user linking record entries. | Core. |  |
|  |  | The system must capture the identity of the system application which linked record entries. | Core. |  |
|  |  | The system must capture the type of record event trigger (i.e. link). | Core. |  |
|  |  | The system must capture the date and time that record entries are linked. | Core. |  |
|  |  | The system must capture the identity of the location (i.e. network address) where record entries are linked. | Core. |  |
|  |  | The system must capture the rationale for linking record entries. | Core. |  |
|  | Care Support. 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 **Unlink Record Entries.** | The system must provide the ability to unlink record entries from previous linkage. | Core. |  |
|  |  | The system must provide the ability to unlink multiple patient record entries according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  | Care Support. 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 Unlink Record Entries. 🡪 **Evidence of Record Entry Unlink Event.** | The system must provide the ability to maintain evidence of record entry unlink events to ensure health record integrity and trust and to enable record audits. | Core. |  |
|  |  | The system must audit each occurrence when linked record entries are unlinked from another entry/object. | Core. |  |
|  |  | The system must capture the identity of the organisation where record entries are unlinked. | Core. |  |
|  |  | The system must capture the identity of the patient who is subject of un-linked record entry. | Core. |  |
|  |  | The system must capture the identity of the user that unlinks record entries. | Core. |  |
|  |  | The system must capture the identity of the system application which unlinked record entries. | Core. |  |
|  |  | The system must capture the type of record event trigger (i.e. unlink). | Core. |  |
|  |  | The system must capture the date and time that record entries are unlinked. | Core. |  |
|  |  | The system must capture the identity of the location (i.e. network address) where record entries are unlinked. | Core. |  |
|  |  | The system must capture the rationale for unlinking record entries. | Core. |  |
|  | Care Support. 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 **Place Record Entries on Legal Hold.** | The system must provide the ability to place record entries on legal hold. | Core. |  |
|  |  | The system must provide the ability to manage a specified set of patient record entries during a period of legal hold, marking their status as “on hold” and preventing alteration according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  | Care Support. 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 Place Record Entries on Legal Hold. 🡪 **Evidence of Record Entry Legal Hold Event.** | The system must provide the ability to maintain evidence of record entry legal hold events to ensure health record integrity and trust and to enable record audits. | Core. |  |
|  |  | The system must audit each occurrence when a set of record entries is placed on legal hold. | Core. |  |
|  |  | The system must capture the identity of the organisation where record entries are placed on legal hold. | Core. |  |
|  |  | The system must capture the identity of the patient who is subject of record entries placed on legal hold. | Core. |  |
|  |  | The system must capture the identifier for the set of record entries placed on legal hold. | Core. |  |
|  |  | The system must capture the identity of the user placing record entries on legal hold. | Core. |  |
|  |  | The system must capture the identity of the system application which placed record entries on legal hold. | Core. |  |
|  |  | The system must capture the type of record event trigger (i.e. placed on legal hold). | Core. |  |
|  |  | The system must capture the date and time that record entries are placed on legal hold. | Core. |  |
|  |  | The system must capture the identity of the location (i.e. network address) from which record entries are placed on legal hold. | Core. |  |
|  |  | The system must capture the identity of the location (i.e. network address) in which record entries on legal hold are placed. | Core. |  |
|  |  | The system must capture the rationale for placing record entries on legal hold. | Core. |  |
|  |  | The system must capture the data, document or other identifier for record entries placed on legal hold. | Core. |  |
|  | Care Support. 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 **Release Record Entry from Legal Hold.** | The system must provide the ability to release record entries from legal hold. | Core. |  |
|  |  | The system must provide the ability to release patient record entries from legal hold status according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  | Care Support. 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifecycle. 🡪 Release Record Entry from Legal Hold. 🡪 **Evidence of Record Entry Legal Hold Release Event.** | The system must provide the ability to maintain evidence of record entry legal hold release events to ensure health record integrity and trust and to enable record audits | Core. |  |
|  |  | The system must audit each occurrence when a set of record entries are released from legal hold. | Core. |  |
|  |  | The system must capture the identity of the organisation where record entries are released from legal hold. | Core. |  |
|  |  | The system must capture the identity of the patient who is subject of record entries released from legal hold. | Core. |  |
|  |  | The system must capture the identity of the user releasing record entries from legal hold. | Core. |  |
|  |  | The system must capture the identity of the system application which released record entries from legal hold. | Core. |  |
|  |  | The system must capture the type of record event trigger (i.e. released from legal hold). | Core. |  |
|  |  | The system must capture the date and time that record entries are released from legal hold. | Core. |  |
|  |  | The system must capture the identity of the location (i.e. network address) where record entries are released from legal hold. | Core. |  |
|  |  | The system must capture the rationale for releasing record entries from legal hold. | Core. |  |
|  | Care Support. 🡪 Record Lifecycle and Lifespan. 🡪 **Record Lifespan.** | The system must provide the ability to manage record entries in persistent storage over the full course of the record lifespan. | Core. |  |
|  | Care Support. 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifespan. 🡪 **Manage Record Entries.** | The system must provide the ability to manage/persist record entries upon record entry creation and thereafter on a continuous and uninterrupted basis for the lifespan of each record entry. The aim is to ensure long-term retention and preservation of EHR record entries, without alteration. | Core. |  |
|  |  | The system must manage each record entry as a persistent, indelible (unalterable) data object, including its revision history. | Core. |  |
|  |  | The system must manage (persist) each record entry for its applicable retention period according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must manage (persist) the full set of identity, event and source audit metadata for each record entry. | Core. |  |
|  |  | The system must manage (persist) the attestation/signature event (e.g. electronic signature) of each record entry. | Core. |  |
|  |  | The system must manage record entries with data content in standard and non-standard formats. | Core. |  |
|  |  | The system must manage record entries containing both structured and unstructured data. | Core. |  |
|  |  | The system must manage record entry content with tagged or delimited elements including data formatted as text, documents, images, audio, waveforms, in ASCII, binary and other encodings. | Core. |  |
|  |  | The system must manage record entries in clinical and business contexts. | Core. |  |
|  |  | The system must provide the ability to manage sets of clinical and business context data, to be captured in or linked to record entries. | Core. |  |
|  |  | The system must provide the ability to extract all available elements included in the definition of a legal medical record (including audit log entries and the decoded translation of anything stored only in code form) according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to tag specific record entries for deletion according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to manage record entries that are tagged for deletion by allowing review and confirmation of the set of tagged entries before actual deletion occurs according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to delete record entries that are tagged for deletion according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to render confirming notification that the destruction of record entries that were tagged for deletion occurred according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to undelete record entries according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must transmit record destruction date information along with existing data when transmitting record entries (or extracts) to another entity. | Core. |  |
|  |  | The system must manage health care information for organisations that have multiple facilities according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must tag and render patient information that has not been previously presented to the clinician. | Core. |  |
|  |  | The system must present a notification to a clinician when patient information from internal or external systems is tagged as not been previously presented to the clinician, in accordance with user role and according to RSA industry standards, RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must preserve the original headings and sub-headings used to organise, group or order individual record entries, including the names and terms used to label them. | Core. |  |
|  |  | The system must be able to preserve and recreate the original presentation of EHR data and enable alternative views of the data to be created without losing the semantic intent of the data. | Core. |  |
|  |  | The system must persist any explicitly defined relationships between different parts of the record, such as links between treatments and subsequent complications and outcomes. | Core. |  |
|  |  | The system must persist the original data values within an EHR entry, including code systems and measurement units used at the time the data were originally committed to the system. | Core. |  |
|  |  | The system must preserve text in the original language used for composing a health record entry, and identify the language used. | Core. |  |
|  |  | The system must be able to include the values of reference ranges used to interpret particular data values. | Core. |  |
|  |  | The system must be able to represent links between requested, planned, performed and reported healthcare activities (e.g. linking a test request to a performed test and to its result). | Core. |  |
|  |  | The system must enable one or more comments or annotations to be linked to an original health record entry, possibly composed by different authors at different points in time, without changing the content of the original entry. | Core. |  |
|  |  | The system must represent features that emphasise particular health record entries (e.g. for unexpected findings or abnormal results). | Core. |  |
|  | Care Support. 🡪 Record Lifecycle and Lifespan. 🡪 Record Lifespan. 🡪 **Manage Record Entries for Legal Hold.** | The system must manage record entries for legal hold to ensure preservation of a set of record entries for a designated time, held without alteration. | Core. |  |
|  |  | The system must provide the ability to place record entries on legal hold as described above. | Core. |  |
|  |  | The system must provide the ability to release record entries from legal hold as described above. | Core. |  |
|  |  | The system must provide the ability to control access to data/records during legal hold, preventing un-auditable alteration or unauthorised use for preservation purposes. | Core. |  |
|  |  | The system must provide the ability to maintain records beyond normal retention period according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to capture the reason for preserving records beyond the normal retention period. | Core. |  |
|  |  | The system must provide the ability to render a legal hold notice identifying who to contact for questions when a user attempts to alter a record on legal hold. | Core. |  |
|  |  | The system must provide the ability to render record entry content preserved for a legal hold by type, class or encounter (e.g. medical record entry or report, e-mail, metadata, etc). | Core. |  |
|  | Care Support. 🡪 Record Lifecycle and Lifespan. 🡪 **Record States.** | The system must provide the ability to manage record states. An important underlying principle for managing record states is the need to retain record entries that have been viewed for patient care purposes even if the entry has not been completed or attested. This principle has important legal impact because it provides an account of what the provider viewed and relied on for clinical decision-making. For example, if record entry content was available in pending state and a clinician used the information to make decisions, it is important to retain the pending version even after the final version was available. Determining if record entry content was used for patient care may be challenging. Access logs could provide a mechanism to determine if the information was viewed (but to prove that it was used for decision making remains a challenge). | Core. |  |
|  | Care Support. 🡪 Record Lifecycle and Lifespan. 🡪 Record States. 🡪 **Manage Record Pending State.** | The system must provide the ability to manage ‘pending’ record state. | Core. |  |
|  |  | The system must provide the ability to manage the length of time a record entry can be in a pending or inactive state before being administratively closed. | Core. |  |
|  |  | The system must present a notification to the author or designate that a record entry will be administratively closed after a designated period of time. | Core. |  |
|  |  | The system must present pending record entries in accordance with the organisation's business rules. | Core. |  |
|  |  | The system must tag and present that a record entry is pending or incomplete. | Core. |  |
|  |  | The system must provide the ability to update the status of a record entry with status ‘pending’ to one of: 1) complete; 2) complete while retaining incomplete version of the entry if viewed for patient care or used by the system; 3) mark as erroneous and retain if entry used for patient care or by the system; or 4) discard if entry never viewed for patient care purposes. | Core. |  |
|  |  | The system must provide the ability to manage administrative closure of a record entry after a period of inactivity according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must capture a date/time stamp and identify the author each time a record entry is updated including when opened, when updated, with the signature event and when officially closed. | Core. |  |
|  | Care Support. 🡪 Record Lifecycle and Lifespan. 🡪 Record States. 🡪 **Manage record entry amended, corrected and augmented state.** | The system must provide the ability to manage amendments, corrections and augmentations to finalised records. When an amendment, correction or augmentation has been made, principles for documentation practices require that the original documentation must be accessible, readable, and unobliterated. A user must have a clear indication that modifications have been made to a record entry. The original record entry is not required to be displayed but can be linked or traced back. The original record entry and each successive amendment, correction or augmentation should be retained for the legally prescribed timeframe as defined by RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to update a record entry for purposes of amendment, correction or augmentation. | Core. |  |
|  |  | The system must provide the ability to tag a record entry as an amendment, a correction of erroneous information and the reason, or an augmentation to supplement content. | Core. |  |
|  |  | The system must capture, maintain and render the corresponding date, time, and user specifying when and by whom a record entry was amended, corrected, or augmented. | Core. |  |
|  |  | The system must present the current version and provide a link or clear direction for accessing previous version(s) of the record entry. | Core. |  |
|  |  | The system must manage all versions of the record entry for the legal retention period, conforming to function. | Core. |  |
|  | Care Support. 🡪 Record Lifecycle and Lifespan. 🡪 Record States. 🡪 **Manage record entry succession and version control.** | The system must provide the ability to manage successive record entry versions over time. Versioning and succession management is based on record entry content, and/or status change over time. Examples of record entry versions are listed below (but not limited to the list below):   1. Preliminary laboratory report. 2. Final laboratory report. 3. Amended or corrected documents. 4. A completed and attested record entry. 5. A record entry completed and attested which has been modified one or more times. 6. A record entry that has been viewed for clinical decision-making purposes by an individual other than the author. 7. A record entry that has been captured in an incomplete state per organisation business rules and updated over time (i.e. a preliminary laboratory test). 8. A record entry that electively, according to the author, must be preserved in the current state at a given point in time.   The prior versions of record entries must be retained for the legally prescribed timeframe as defined by RSA industry standards, scope of practice, organisational policy, and jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to manage record entries that become new versions when their state changes (e.g. augmented, amended, corrected, etc). | Core. |  |
|  |  | The system must provide the ability to update a record entry and save it as a new version. | Core. |  |
|  |  | The system must capture, maintain and render the date, time and user for the original and each updated version of the record entry. | Core. |  |
|  |  | The system must manage the succession of record entries in chronological version order. | Core. |  |
|  | Care Support. 🡪 Record Lifecycle and Lifespan. 🡪 Record States. 🡪 **Manage record entry retraction.** | The system must provide the ability to retract a record entry. A retracted record entry must not be visible in standard queries; however, it must remain accessible in the EHR audit records if evidence is required for legal purposes or other exceptional situations. | Core. |  |
|  |  | The system must provide the ability to hide a record entry from view and retain it such that it is only visible upon specific request and with appropriate authorisation. | Core. |  |
|  |  | The system must provide the ability to capture users who viewed a record entry prior to its retraction and notify them of the retraction. | Core. |  |
|  |  | The system must provide the ability to capture and retain the reason why a record entry was retracted. | Core. |  |
|  | Care Support. 🡪 Record Lifecycle and Lifespan. 🡪 **Record Completeness.** | The system must provide the ability to manage record completeness. The system must enable application of business rules regarding minimum elements and timeframes for completion of records. | Core. |  |
|  |  | The system must provide the ability to manage timeframes for completion of specified record entry content according to organisational business rules. | Core. |  |
|  |  | The system must provide the ability to tag by patient/health record number the completeness status of specified record entry content noting identified deficiencies. | Core. |  |
|  |  | The system must provide the ability to render a report by patient/health record number indicating the completeness status of specified record entry content noting identified deficiencies. | Core. |  |
|  |  | The system must provide the ability to render a visual indicator denoting that the content of a specified record entry content is incomplete according to organisational business rules. | Core. |  |
|  |  | The system must provide the ability to render a reminder to clinicians for the completion of specified record entry content (at the data or report level) according to organisational business rules (e.g. complete attestation, complete a section). | Core. |  |
|  |  | The system must tag specific missing elements/sections of incomplete records. | Core. |  |
|  | Care Support. 🡪 **Record Entry Data Value Types.** | The system must accommodate different data value types as listed below. | Core. |  |
|  | Care Support. 🡪 Record Entry Data Value Types. 🡪 **Textual Data Value Types.** | The system must be able to represent free text (narrative) comments and descriptions. | Core. |  |
|  |  | The system must be able to represent data values that are free text. | Core. |  |
|  |  | The system should be able to represent and distinguish information recorded in different natural languages. | Non-Core. |  |
|  |  | The system should be able to represent proper nouns, synonyms and abbreviations in their original language. | Non-Core. |  |
|  |  | The system should be able to indicate if textual information has been translated from its original language. | Non-Core. |  |
|  |  | The system should indicate if a term was an original value chosen by (and verified by) the author or has automatically been mapped from a different original value. | Non-Core. |  |
|  |  | The system should indicate if textual information has been analysed and coded with text analysis software and, if so, by which software and version. | Non-Core. |  |
|  |  | The system should indicate if a textual expression has been generated from a term or terms via natural language generation and, if so, by which software and version. | Non-Core. |  |
|  | Care Support. 🡪 Record Entry Data Value Types. 🡪 **Term Data Value Types.** | The system should represent terms in the EHR in a way that retains their meaning as set forth by the original author. | Non-Core. |  |
|  |  | The system should represent a coded term through its code value together with the corresponding coding system identifier (name and version or Object Identifier (OID)). | Non-Core. |  |
|  |  | The system should be able to represent pre- and post-coordinated term combinations. | Non-Core. |  |
|  |  | The system should be able to represent probability or confidence (e.g. as a scale, percentage or a term). | Non-Core. |  |
|  |  | The system should be able to accommodate future evolution in terminology systems, and the addition of new terms to existing systems. | Non-Core. |  |
|  |  | The system should represent and persist (or reference) the original code meaning, as set forth by the original author, for each term used within the record. | Non-Core. |  |
|  |  | The system should be able to represent data values that are terms that originate from at least one terminology system, as required in the deployment context. | Non-Core. |  |
|  |  | The system should be able to represent data values that are terms that are codes and classifications. | Non-Core. |  |
|  |  | The system should be able to represent data values that are terms that are identifiers. | Non-Core. |  |
|  | Care Support. 🡪 Record Entry Data Value Types. 🡪 **Quantity and Numeric Data Value Type.** | The system must be able to represent numeric and quantifiable data (e.g. integer, real). | Core. |  |
|  |  | The system must be able to represent quantity ranges. | Core. |  |
|  |  | The system must be able to represent units of measurement (including compound units). | Core. |  |
|  |  | The system must be able to represent the precision and accuracy of a measured quantity. | Core. |  |
|  |  | The system must be able to represent a confidence interval for a quantity (e.g. as an upper and lower limit, a coefficient of variation or a standard deviation). | Core. |  |
|  |  | The system must be able to represent numeric values as percentages. | Core. |  |
|  |  | The system must be able to represent an ordinal data value, in which a numeric value is combined with a term. | Core. |  |
|  |  | The system must be able to represent quantity ratios, including independently specified units for the numerator and denominator. | Core. |  |
|  |  | The system must be able to represent a reference range or normal physiological range, if these form an integral part of an observation's result. | Core. |  |
|  |  | The system must be able to reference health record entries whose data values have been used as the raw data for a derived value; such references shall be specific to the version of each record entry that was used. | Core. |  |
|  |  | The system must be able to represent derived data values that are based on pre-existing values in an EHR, and to reference the original entries on which that derived value is based (e.g. when calculating an Apgar score or Barthel index). | Core. |  |
|  |  | The system must be able to represent or reference the calculations or formula(e) by which data have been derived. | Core. |  |
|  |  | The system must be able to represent the description or identification of an instrument or device or system component from which clinical measurements have been obtained. | Core. |  |
|  |  | The system must be able to indicate or represent the use of external decision support tools for calculation or derivations of values. | Core. |  |
|  |  | The system must be able to represent data values that are physiological measurements, quantities, units of measure. | Core. |  |
|  |  | The system must be able to represent data values that are biological signals. | Core. |  |
|  | Care Support. 🡪 Record Entry Data Value Types. 🡪 **Time data value type.** | The system must be able to represent and distinguish multiple instances of the same observation, each with the absolute time of its recording or as an offset to an origin point in time. | Core. |  |
|  |  | The system must be able to represent time in absolute terms, as a duration or as an expression relative to other times, events, or conditions. | Core. |  |
|  |  | The system must represent absolute time together with a specified time zone. | Core. |  |
|  |  | The system must be able to represent dates and times imprecisely (to different granularities, e.g. a date as a month and a year or only a year, time as an hour). | Core. |  |
|  |  | The system must be able to represent time specifications expressed as periods of day or time: e.g. morning, afternoon, evening, shifts (a.m., p.m., at night). | Core. |  |
|  |  | The system must be able to represent time specifications expressed as approximate points of date/time: e.g. upon awakening, at mealtime (breakfast, lunch, dinner), at bedtime. | Core. |  |
|  |  | The system must be able to represent time specifications expressed as relative points of day or time: e.g. before breakfast, after lunch, before bedtime, 4 h post-operative, 2 days post-discharge, one week after last dose. | Core. |  |
|  |  | The system must be able to represent time specifications expressed as alternating and patterned dates/times: e.g. alternate every 8 h, alternate every 3 days, every Monday/Wednesday/Friday, every Sunday, every third Tuesday. | Core. |  |
|  |  | The system must be able to represent data values that are time and duration. | Core. |  |
|  | Care Support. 🡪 Record Entry Data Value Types. 🡪 **Boolean Data Value Type.** | The system must be able to represent data that are of a Boolean type. | Core. |  |
|  |  | The system must be able to represent the particular language expression that was selected by an author when making a Boolean choice (such as “Yes”, “False”, “Positive”, “Agree”). | Core. |  |
|  | Care Support. 🡪 Record Entry Data Value Types. 🡪 **Graphical and Multimedia Data Value Type.** | The system must be able to represent multimedia data types in standards-compliant formats, including diagrams, drawings, tables and graphs. | Core. |  |
|  |  | The system must represent radiological images, bio-signals, video, sound, geospatial and other multimedia data in a way that permits them to be rendered to a quality compatible with their source and intended use. | Core. |  |
|  |  | The system must be able to represent the specification of rendering information for a multimedia data object. | Core. |  |
|  |  | The system must be able to represent the annotation and narration of multimedia data in a way that preserves their spatial relationship and time synchronization to the original data. | Core. |  |
|  |  | The system must be able to represent data values that are drawings, diagrams, charts and tables. | Core. |  |
|  |  | The system must be able to represent data values that are images, including radiological images, photographs, geospatial images and scanned documents or references to such images. | Core. |  |
|  |  | The system must be able to represent data values that are sound. | Core. |  |
|  |  | The system must be able to represent data values that are video. | Core. |  |
|  | Care Support. 🡪 Record Entry Data Value Types. 🡪 **Externally Referenced Data Value Types.** | The system must be able to represent references to data that are not part of the EHR, such as knowledge resources or multimedia data. | Core. |  |
|  | Care Support. 🡪 **Manage User Help.** | The system must provide the ability to manage the configuration, and customisation of appropriate user help that is context sensitive. | Core. |  |
|  |  | The system must provide the ability to manage the configuration and customisation of User Help in accordance with user requirements, and according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to receive queries and render responses for data entry and system navigation assistance (User Help). This may be enabled through chatbot functionality. | Core. |  |
|  |  | The system should exchange User Help queries and responses via live online chat. | Non-core. |  |
|  |  | The system must render context-sensitive invokable help to guide users through activities in the system (e.g. charting steps, menu navigation). | Core. |  |
|  | Care Support. 🡪 **External Provider Portal (EPP).** | The system must grant external providers access to the eHealth system in support of continuity of care. The external provider must have access to his/her patient’s EHR and must have the ability to update it during the encounter. | Core. |  |
|  |  | The system should provide the ability to external providers to access his/her patient’s EHR from any location, using any browser and any computing device. | Non-core. |  |
|  |  | The system should give an external provider direct access to the eHealth system in accordance with applicable RBAC to ensure that the external provider only has access to pre-determined and agreed eHealth system functions. For example, the external provider is only granted access to information pertaining to patients that are treated by him/her. | Non-core. |  |
|  |  | The system must have the ability to prevent the storing of EHR information on the external provider’s computing device. | Core. |  |
|  |  | The system must subject an external provider to the same security and privacy restrictions (e.g. for access control, PKI, etc), business rules, clinical rules & protocols, etc as internal provider users of eHealth system functions. | Core. |  |
|  | Care Support. 🡪 **Medico-legal Admin.** | The system should enable users to carry out administrative duties associated with the provision of care. This includes management of medico-legal case documents and medical records linked to the medico-legal cases, as well as integration with research and collaboration tools. | Non-Core. |  |
|  | Care Support. 🡪 Medico-legal Admin. 🡪 **Medico-legal Case Management** | The system must enable the user to create a new case record and to update an existing case. | Non-Core. |  |
|  |  | The system should have a mechanism for a batch scanning and uploading of case documents. | Non-Core. |  |
|  |  | The system should have a task bar where the user can create an action list and track deadlines. | Non-Core. |  |
|  |  | The system should keep track of updates made on the case records, the case status changes and upcoming deadlines | Non-Core. |  |
|  | Care Support. 🡪 Medico-legal Admin. 🡪 **Medical Records Integration.** | The system should be able to integrate with other systems to facilitate easy retrieval of patient records and provider particulars. | Non-Core. |  |
|  | Care Support. 🡪 Medico-legal Admin. 🡪 **Integration with Legal Research Tools.** | The system should be able to access up to date up-to-date libraries of official court material (e.g. forms, past cases, regulations, etc.) | Non-Core. |  |
|  | Care Support. 🡪 Medico-legal Admin. 🡪 **Document Management.** | The system should be able to convert word files into legal forms and templates. | Non-Core. |  |
|  |  | The system should have a mechanism for easy classification, grouping and identification of documents through the use of barcodes/QR Codes and/or keyword tags and/or index. | Non-Core. |  |
|  |  | The system should be able to merge related documents according to the relevant case. | Non-Core. |  |
|  |  | The system should organise cases with tags and/or barcodes/QR Codes for easy retrieval. | Non-Core. |  |
|  |  | The system should enable security encryption at different level of documents management (e.g. by folder or per document). | Non-Core. |  |
|  | Care Support. 🡪 Medico-legal Admin. 🡪 **Search and Retrieval.** | The system should be able to detect and retrieve cases and documents based on the user preferred search parameter (e.g. keyword search, patient particulars, barcode, QR Code, etc.) | Non-Core. |  |
|  | Care Support. 🡪 Medico-legal Admin. 🡪 **Signature Centre.** | The system should be able to make a distinction between signed documents and documents awaiting signature and sort them accordingly. | Non-Core. |  |
|  |  | The system should be able to distinguish between internal approval requests and documents originating from or that need to be sent to external parties. | Non-Core. |  |
|  |  | The system should be able to detect pages with missed signatures and/or initials. | Non-Core. |  |
|  |  | The system should keep record of critical details relating to the signage (e.g. Signatory particulars, time and location). | Non-Core. |  |
|  |  | The system should send alerts between the signature requestor and the signatory to notify them of the required action and the feedback when the action has been completed. | Non-Core. |  |
|  | Care Support. 🡪 Medico-legal Admin. 🡪 **Calendar.** | The system should have a calendar to centrally manage court appointments and deadlines. | Non-Core. |  |
|  | Care Support. 🡪 Medico-legal Admin. 🡪 **Collaboration.** | The system should have a customisable workflow to allow for tagged task allocation alerts. | Non-Core. |  |
|  |  | The system should have capability for text messaging with/ and file sharing. | Non-Core. |  |

## Care resources requirements

Care resources requirements are expressed in Table 11 below, per function as listed below.

1. Facility support
   1. Care providers
      1. Provider registry
      2. Provider location
      3. Provider group
      4. Provider caseload
      5. Provider-patient relationships
      6. Provider credentials
      7. Provider hours worked
   2. Equipment and devices
      1. Equipment and devices functions
      2. Equipment registry
   3. Resource availability
      1. Facility demographics
      2. External facility status
      3. Resource availability status
      4. Resource allocation
      5. Resource scheduling
      6. Patient triage
      7. Patient oral health priority
      8. Waiting room management
      9. Patient acuity
   4. Performance
      1. Care performance monitoring
         1. Outcome of care
         2. Performance reporting
         3. Process improvement
         4. Performance dashboards
      2. Resource performance
      3. Cost performance
   5. IC
      1. IC inspection
      2. IC surveillance
      3. IC performance and trends
      4. IC reporting
      5. Cleaning
   6. OHS
      1. Hazard identification and risk assessment (HIRA)
      2. Healthcare surveillance
      3. Occupational Injury and Disease Admin
      4. OHS Compensation Fund Claims
      5. OHS audit and inspection
      6. Incident management
      7. OHS calendar
      8. OHS performance
      9. OHS education
      10. OHS procedures
      11. OHS communication system
   7. WM
      1. WM planning
      2. WM recording
      3. WM analysis
         1. WM calculations
         2. WM comparison
      4. WM reporting
   8. Healthcare Supply Chain
      1. Inventory management
   9. Quality control.
2. Facilities
   1. Facility registry
   2. Hospital
      1. Hospital care and admin
         1. Pre-admission
         2. Admission
         3. Patient bed allocation
         4. Patient care and admin [Hospital]
         5. Hospital care
            1. Inpatient care
            2. Critical care
            3. Theatre
            4. Emergency care
         6. Patient transfer
         7. Kitchen
         8. Discharge
         9. Invoicing [Hospital]
      2. Hospital resource admin
         1. Care providers [Hospital]
         2. External facility status [Hospital]
         3. Equipment and devices [Hospital]
         4. Resource availability status [Hospital]
         5. Resource allocation [Hospital]
         6. Resource scheduling [Hospital]
         7. Performance [Hospital]
         8. Linen and laundry
         9. IC [Hospital]
         10. WM [Hospital]
   3. Clinic
      1. Clinic care and admin
         1. Resource scheduling [Clinic]
         2. Waiting room management [Clinic]
         3. Clinic care
         4. Patient care admin [Clinic]
         5. Invoicing [Clinic]
      2. Clinic resource admin
         1. Care providers [Clinic]
         2. External facility status [Clinic]
         3. Equipment and devices [Clinic]
         4. Resource availability status [Clinic]
         5. Resource allocation [Clinic]
         6. Performance [Clinic]
         7. IC [Clinic]
         8. WM [Clinic]
   4. Pharmacy/Dispensary
      1. Pharmacy/dispensary care and admin
         1. Pharmacy/dispensary order processing
         2. Patient compliance tracking [Pharmacy/Dispensary]
         3. Drug utilisation review [Pharmacy/Dispensary]
         4. Dispensing
         5. Pharmacy/dispensary results
         6. Invoicing [Pharmacy/Dispensary]
      2. Pharmacy/Dispensary resource admin
         1. Resource availability status [Pharmacy/Dispensary]
         2. Care providers [Pharmacy/Dispensary]
         3. Equipment and devices [Pharmacy/Dispensary]
         4. Resource allocation [Pharmacy/Dispensary]
         5. Resource scheduling [Pharmacy/Dispensary]
         6. Performance [Pharmacy/Dispensary]
         7. Pharmacy stock control
         8. IC [Pharmacy/Dispensary]
         9. WM [Pharmacy/Dispensary]
   5. Radiology
      1. Radiology care and admin
         1. Radiology order processing
         2. Patient belongings admin [Radiology]
         3. Radiology procedure
         4. Radiology results
         5. Invoicing [Radiology]
      2. Radiology resource admin
         1. Resource availability status [Radiology]
         2. Care providers [Radiology]
         3. Equipment and devices [Radiology]
         4. Resource allocation [Radiology]
         5. Resource scheduling [Radiology]
         6. Performance [Radiology]
         7. Waiting room management [Radiology]
         8. Radiation safety
         9. IC [Radiology]
         10. WM [Radiology]
   6. Laboratory
      1. Laboratory care and admin
         1. Laboratory order processing
         2. Laboratory tests
         3. Laboratory results
         4. Invoicing [Lab]
      2. Laboratory resource admin
         1. Resource availability status [Lab]
         2. Care providers [Lab]
         3. Equipment and devices [Lab]
         4. Resource allocation [Lab]
         5. Resource scheduling [Lab]
         6. Performance [Lab]
         7. IC [Lab]
         8. WM [Lab]
   7. Emergency response (ER)
      1. ER care and admin
         1. ER contact centre
         2. ER patient identification
         3. ER treatment
         4. Invoicing (ER)
      2. ER resource admin
         1. Resource availability status [ER]
         2. Care providers [ER]
         3. Equipment and devices [ER]
         4. Resource allocation [ER]
         5. Resource scheduling [ER]
         6. Performance [ER]
         7. IC [ER]
         8. WM [Lab]
   8. Dental/Orthopaedic laboratory
      1. Dental/Orthopaedic laboratory care and admin
         1. Dental/Orthopaedic laboratory order processing
         2. Dental/Orthopaedic laboratory results
         3. Invoicing [Dental/Orthopaedic laboratory]
      2. Dental/Orthopaedic laboratory resource admin
         1. Resource availability status [Dental/Orthopaedic laboratory]
         2. Resource allocation [Dental/Orthopaedic laboratory]
         3. Resource scheduling [Dental/Orthopaedic laboratory]
         4. Care providers [Dental/Orthopaedic laboratory]
         5. Performance [Dental/Orthopaedic laboratory]
         6. IC [Dental/Orthopaedic laboratory]
         7. WM [Dental/Orthopaedic laboratory]
   9. Disaster management
      1. Disaster admin
      2. Emergency preparedness planning
      3. Hazard identification and risk assessment
      4. Incident response
      5. Patient tracking and triage
      6. Communication and coordination
      7. Patient evacuation and sheltering
      8. Resource management
      9. Continuity of operations
      10. Data management and reporting
      11. Performance management

Column a of Table 11 reflects function names. The function for which descriptions and requirements are provided in column b, are typed in bold font. Functional hierarchy that provides context for the function in bold is indicated using arrows.

Column b of Table 11 contains the description and requirements relevant to the function stated in bold in column a.

Column c of Table 11 is used to indicate if a requirement is considered as a core or non-core requirement. A requirement is classified as core when it must be satisfied by the eHealth system. Non-core requirements are considered as ‘nice-to-have’ requirements.

The bidder must indicate in Column d of Table 11, for each requirement, as indicated in the table below. Bidders are encouraged to provide additional information as comment per requirement (column d of Table 11).

Table 10 – Response legend (Care Resources)

| **Response indicator** | **Definition** |
| --- | --- |
| Y | The functionality exists in the proposed system (no development is required) |
| YC | The proposed system must be customised with minor development to meet the requirement |
| YD | The functionality does not exist and must be developed to meet the requirement |
| N | The functionality does not exist in the proposed system and cannot be developed |

**NOTE:** Where “according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law” is stated as part of a requirement it means that the system must be configurable to accommodate different rules and processes over time, based on RSA industry standards, SAMHS scope of practice, SAMHS organisational policy and/or jurisdictional law.

Table 11 – Care resources requirements

| **No** | **Function** | **Description and Requirements** | **Core**  **Non-Core** | **Bidder response & comment:**  **Y = Yes exist**  **YC = Customise, Minor development**  **YD = Can be developed**  **N = Not available** |
| --- | --- | --- | --- | --- |
| **a** | **b** | **c** | **d** |
|  | Care Resources. 🡪 **Facility Support.** | The system must provide facility support functions. | Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 **Care Providers.** | Care providers include SAMHS internal providers (individuals) and external individual providers as well as external organisations such as private hospitals, pharmacies, and laboratories. | Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 Care Providers. 🡪 **Provider Registry.** | The system must provide the ability to manage the provider registry. | Core. |  |
|  |  | The system must provide the ability to include information such as credentials, certifications, and information for verifying a practitioner’s authorisation to access data, e.g. provider security clearance status, in the provider registry. This must include provider roles. | Core. |  |
|  |  | The system must provide the ability to keep record of hours worked by all providers, including interns. | Core. |  |
|  |  | The system must provide the ability to manage a registry or directory of all personnel who currently use or access the system according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. This includes internal as well as external providers. | Core. |  |
|  |  | The system must provide the ability to mark an external provider as a designated/preferred service provider. | Core. |  |
|  |  | The system must provide the ability to capture and maintain the healthcare services that an external provider is rendering. | Core. |  |
|  |  | The system must provide the ability to capture and maintain realm-specific legal identifiers required for care delivery (e.g. the provider’s license number or national provider identifier). | Core. |  |
|  |  | The system must provide the ability to capture and maintain the role of each provider associated with a patient (e.g. encounter provider, primary care provider, attending, resident, or consultant). | Core. |  |
|  |  | The system must link provider information in the registry or directory with the security function to determine or identify authorised levels of access. | Core. |  |
|  |  | The system should provide the ability to manage a directory of clinical/support personnel external to the organisation that are not users of the system (to facilitate documentation and information communication). | Non-Core. |  |
|  |  | The system must provide the ability to update the provider’s access to the requested patient’s information when a patient provider relationship is established in the system (e.g. when patient is cared for in Emergency, system enables emergency attending provider to access patient’s information); according to scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to use registries or directories to uniquely identify providers for the provision of care. Refer to access control and emergency access control requirements. The registry or directory, includes, *inter alia*, the provider’s full name, address or physical location, and a 24x7 telecommunications address (e.g. a phone or pager access number). | Core. |  |
|  |  | The system must provide the ability for authorised users to hide selected elements of the registry or directory information for the users of the system based on the user’s security level and access needs. For example, the administrator hides from data-entry clerks the name of the data-entry clerk’s immediate relatives who are listed on the hospital’s cancer registry. | Core. |  |
|  |  | The system must provide the ability to maintain a registry or directory which identifies the provider by multiple unique identifiers. | Core. |  |
|  |  | The system must provide the ability to “blacklist/de-activate” external service providers, including the reason for “blacklisting/de-activation”. | Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 Care Providers. 🡪 **Provider Location.** | The system must provide the ability to maintain provider location. | Core. |  |
|  |  | The system should provide the ability to manage information on a provider’s location, and/or contact information when the provider is on a facility’s premises. The aim is to assist with handling critical care situations, which might involve locating on-site practitioners by name or required specialty. Such information should be auto-updated by a real-time tracking system. | Non-Core. |  |
|  |  | The system must provide the ability to manage a provider’s scheduled visits to a given facility. | Core. |  |
|  |  | The system must provide the ability to manage information on a provider’s location, and/or contact information when the provider is “on call”. | Core. |  |
|  |  | The system should manage information necessary to identify primary and secondary practice locations or offices of providers. | Non-Core. |  |
|  |  | The system should contain the information on times of service availability at primary and secondary locations or offices of providers. | Non-Core. |  |
|  |  | The system should provide the ability to provide a provider’s geospatial location at any time when on duty. | Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 Care Providers. 🡪 **Provider Group.** | The system should provide the ability to manage provider groups. | Non-Core. |  |
|  |  | The system should provide the ability to render a current directory, registry or repository of teams or groups of providers according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  |  | The system should provide the ability for authorised users to manage the assignment of providers to appropriate teams or groups of providers according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  |  | The system should provide the ability to determine the identity of a provider’s employer(s) for administrative or financial purposes through the use of internal, and/or external registry services or directories. | Non-Core. |  |
|  |  | The system should provide the ability to manage care team membership. Note that the system must allow a provider to be part of multiple teams/groups. | Non-Core. |  |
|  |  | The system should provide the ability to manage demographic and scheduling information on care team members, according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 Care Providers. 🡪 **Provider Caseload.** | The system should provide the ability to maintain providers’ caseload. (A caseload is the total number of patients managed by a particular healthcare provider or agency). The concept of caseload or panel of patients facilitates continuity of care and distribution of work. A provider might have multiple defined caseloads in an organisation. Caseload information may indicate an opening on a certain caseload or that a certain patient is unsuitable for a caseload. A patient may be given access to a listing of caregivers with open caseloads to select a provider. | Non-Core. |  |
|  |  | The system should provide the ability to manage a provider’s caseload or panel information according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Non-Core. |  |
|  |  | The system should provide the ability to define multiple defined caseloads per provider. | Non-Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 Care Providers. 🡪 **Provider-Patient Relationships.** | The system must provide the ability to manage provider-patient relationships. | Core. |  |
|  |  | The system must provide the ability to extract the information needed to identify all providers by name associated with a specific patient encounter. | Core. |  |
|  |  | The system must provide the ability to tag the role of each provider associated with a patient (e.g. encounter provider, primary care provider, attending, resident, or consultant). | Core. |  |
|  |  | The system must provide the ability to tag the role of each provider associated with a patient using structured data. | Core. |  |
|  |  | The system must provide the ability to identify providers who have been associated with any encounter for a specific patient (i.e. all the providers who have had any encounter with the patient over time). | Core. |  |
|  |  | The system must provide the ability to capture and maintain, as distinct data elements, the identity of providers who have been associated with a specific patient encounter. | Core. |  |
|  |  | The system must provide authorised users the ability to capture and maintain information on the relationship of provider to patient. | Core. |  |
|  |  | The system must provide the ability to render patient lists by provider. | Core. |  |
|  |  | The system must provide the ability to tag primary or principal provider(s) responsible for the care of a patient within a care setting. | Core. |  |
|  |  | The system must provide the ability to capture and maintain, as structured data elements, the principal provider responsible for the care of an individual patient. | Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 Care Providers. 🡪 **Provider Credentials.** | The system must provide the ability to manage provider credentials. The system must maintain provider credentials, certifications, and other information relevant for records management and evidentiary support. This information supports the process of access control. | Core. |  |
|  |  | The system should indicate whether the provider is a specialist or not and indicate their registration level. | Core. |  |
|  |  | The system must provide the ability to capture and render information on clinician credentialing and privileging requirements, as defined by the applicable professional and governing organisations, according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to capture and render the credential and privilege status for all members of the care team, including those participating remotely (e.g. via tele-health activities such as tele-consultation, home health monitoring) as defined by the applicable professional and governing organisations, according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to capture credentials such as accreditation for external providers that are not individuals, but organisations such as pharmacies/dispensaries, hospitals or laboratories. | Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 Care Providers. 🡪 **Provider Hours Worked.** | The system must provide the ability to record the hours that providers work per category according to RSA industry standards, scope of practice and organisational policy. | Core. |  |
|  |  | The system must provide the ability to calculate and display overtime hours worked per category per provider. | Core. |  |
|  |  | The system must provide the ability to calculate and display overtime hours worked per category. | Core. |  |
|  |  | The system must provide the ability to deliver a quarterly report on overtime worked by providers. | Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 **Equipment and Devices.** | This function requirement includes functions that address management of equipment and devices and equipment registry. | Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 Equipment and Devices. 🡪 **Equipment and devices functions.** | The system must provide the ability to manage electronic medical equipment and devices. | Core. |  |
|  |  | The system should provide the ability to manage (configure, maintain, secure, and monitor) all electronic medical equipment, mobile and other patient monitoring devices, client computers (laptops and desktops), and mobile devices (tablets and smartphones). | Non-Core. |  |
|  |  | The system should provide the ability to perform equipment and device management both on-device and, where possible, remotely (via a network). Network-connected medical equipment and devices are managed as part of the Internet of Things (IoT). | Non-Core. |  |
|  |  | The system must provide the ability to ensure that all equipment uniformly conform to security, network and policy requirements. | Core. |  |
|  |  | The system must provide the ability to support (centrally and per facility) the device user throughout the device lifecycle. | Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 Equipment and Devices. 🡪 **Equipment Registry.** | The system must provide the ability to maintain an equipment registry that stores information about the organisation’s electronic equipment and devices. | Core. |  |
|  |  | The equipment registry must at least include for each uniquely identified device/equipment, its category (e.g. ICT, main medical equipment (MME)) location, configuration, service record / lifecycle management record, (including upgrades and repairs), and status. | Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 **Resource Availability.** | The system must provide the ability to administrate the availability of care resources in support of care provision and must address both operational and longer-term planning issues. It must include resource scheduling, maintaining information about resources (e.g. availability and capabilities), triage, waiting rooms, and patient acuity/severity determination. Note that resources include both human resources and physical resources such as facilities and equipment. | Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 Resource Availability. 🡪 **Facility Demographics.** | The system must provide the ability to manage facility demographics. The system must maintain core information about healthcare facilities such as hospitals, clinics, pharmacies, etc. It must include information such as the location, layout, infrastructure, and usage potential of facilities. Unlike resource availability status, the information used by this function is generally static. | Core. |  |
|  |  | The system must provide the ability to manage the facility’s demographic information:   1. Facility name. | Core. |  |
|  |  | 1. Facility address. | Core. |  |
|  |  | 1. Facility type. | Core. |  |
|  |  | 1. Registration number of the facility. | Core. |  |
|  |  | 1. Facility layout. | Core. |  |
|  |  | 1. Facility infrastructure. | Core. |  |
|  |  | 1. Usage potential of the facility. | Core. |  |
|  |  | 1. Compliance status of the facility according to national core standards | Core. |  |
|  |  | The system must capture transfer facility demographic information for a transfer patient. | Core. |  |
|  |  | The system must make provision for creation of temporal facilities to cater for deployment mission scenarios (e.g. level 1 and level 2 facilities). | Core |  |
|  | Care Resources. 🡪 Facility Support. 🡪 Resource Availability. 🡪 **External Facility Status.** | The system should maintain information regarding status changes of external facilities on which the organisation or facility relies for healthcare service delivery (e.g. labs or long-term care facilities). It must record status changes due to e.g. power outage, flooding, overcapacity, loss of accreditation. Etc. | Non-Core. |  |
|  |  | The system should provide the ability to manage the change of status of an external facility. | Non-Core. |  |
|  |  | The system should provide the ability to notify relevant parties of external facility status changes and may adjust patient care or care workflows accordingly. | Non-Core. |  |
|  |  | The system should provide the ability to apply a business rule to accommodate automatic workflow adjustments in cases where regular status change is anticipated (e.g. a long-term care facility that routinely exceeds its capacity on weekends). | Non-Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 Resource Availability. 🡪 **Resource Availability Status.** | The system must provide that ability to manage resource availability status. Resource availability status entails the maintenance of resource information (from users and other functions) about healthcare facilities for organisational-level planning and response to extraordinary events (e.g. large-scale local or national emergencies). Resource availability status information is also used for internal assessment and planning of individual facilities. The system must provide, on request, the current status of care resources such as, *inter alia*, available beds, providers, support personnel, medical equipment and devices, theatres, supplies, vaccines, ambulances and pharmaceuticals. In organisational-level planning resource availability status information can be used for strategic (re)distribution of resources and patient load to maximise healthcare delivery across the organisation. The system must maintain for each healthcare facility its own resource availability status, which must then be consolidated on organisational level. Unlike facility demographics, the resource availability status information is generally dynamic. | Core. |  |
|  |  | The system must manage healthcare resource availability through interactions with other systems, applications and modules (e.g. available beds, providers, support personnel, ancillary care areas and devices, operating theatres, medical supplies, vaccines, and pharmaceuticals) according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 Resource Availability. 🡪 **Resource Allocation.** | The system must provide the ability to permanently or semi-permanently assign (make available) a resource to another resource. Resource allocation is central to the admin of facilities and provides a framework for resource scheduling. Generally, resource allocation is likely to reflect, at least on a high level, a resource plan. However, when necessary, it could be temporarily adjusted according to patient acuity in emergency situations. Note the following are important aspects of resource allocation that the system must support:   1. Examples. Common examples of resource allocation include assign provider x to service point y; assign medical device x to provider y at outpatient clinic z; assign theatre x in hospital y to discipline z; and assign bed c to ward x in hospital y. 2. Custodianship. Resource allocation is also used to assign ownership/custodianship of a resource such as medical equipment to a human resource or organisation unit. Allocations for custodianship of resources are distinct from allocations for the use of resources, since the owner/custodian of a resource is not necessarily the user of that resource. | Core. |  |
|  |  | The system must provide the ability to manage different resource types. Each specific type of resource must reside in its own registry, which must reflect its hierarchical breakdown, if applicable. Resource types include providers; administrators; organisational units such as facilities (e.g. hospitals, laboratories, pharmacies, etc), service points, and hospital wards (and beds per ward); medical equipment/devices; healthcare disciplines (within facilities), etc. | Core. |  |
|  |  | The system must capture a unique identifier for every incidence of a resource. | Core. |  |
|  |  | The system must provide the ability to assign specific resources to each other, i.e. each resource is identified by its unique identifier. | Core. |  |
|  |  | The system must provide the ability to assign non-specific resources to specific resources. For example, “placeholder” providers of nursing care must be assigned to specific wards in a hospital for purposes such as indicating vacancies or planning staffing levels (based on future requirements or current patient acuity levels). | Core. |  |
|  |  | The system must provide the ability to allocate to a patient the preferred healthcare provider per health care discipline (including oral health). | Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 Resource Availability. 🡪 **Resource Scheduling.** | The system must provide the ability to schedule resources (human and other) for tasks, duties, and appointments. Resource scheduling temporarily binds resources for specific tasks of short duration, (e.g. theatre scheduling, which binds theatre packs, equipment, medication, and personnel to a specific theatre for a surgical procedure), unlike resource allocation, which binds resources indefinitely or semi-permanently. In general, a resource is scheduled within the framework of its resource allocation. However, in exceptional instances, resource scheduling may override the allocation of a resource for a specified reason. Note that although a patient is not a resource, resource scheduling is also used to book (schedule) patients for appointments, theatre, and hospital admission. The following examples illustrate the relationship between resource allocation and resource scheduling.   1. Nurse A is indefinitely allocated to Ward X (by means of resource allocation). Nurse A is also scheduled for the next month (by means of resource scheduling) to work night shift (from 18:00 to 06:00) in Ward X for the first two weeks, and day shift (from 06:00 to 18:00) for the remaining two weeks. 2. Doctor X is allocated to Clinic Y for the next year. Doctor X is also scheduled for a number of appointments with specific patients at Clinic Y at different dates and time slots within the next year. | Core. |  |
|  |  | The system must provide the ability to capture and render patient care resource scheduling information. | Core. |  |
|  |  | The system must provide the ability to manage the schedule of internal and external healthcare resources and devices (e.g. ambulance, wheelchair, dialysis machine). | Core. |  |
|  |  | The system must exchange relevant clinical or demographic information to support the resource scheduling process. | Core. |  |
|  |  | The system must render clinical or demographic information for children or other dependents with the same guarantor to support efficient scheduling. (e.g. a mother with multiple children receiving immunisations). | Core. |  |
|  |  | The system must provide the ability to manage patient appointment requests with health care providers (e.g. evaluate availability, present choices and make the selection for in-person or remote encounter). | Core. |  |
|  |  | The system must provide the ability to render a patient’s, and/or provider’s appointment schedule. | Core. |  |
|  |  | The system must provide the ability to capture appointment scheduling requests from patients. | Core. |  |
|  |  | The system must provide the ability to create a waiting list/limbo list for requests for healthcare resources (care facility (including community health nursing), provider, equipment, appointment) that do not fit into the relevant resource schedule. It is also applicable at emergency rooms and clinics where patients do not always have appointments. Information stored per waiting list must include the waiting list identification; type, start and end dates and times; waiting list entries reflecting the patients on the waiting list; sequence numbers in the queue; duration being on the waiting list; reason why the patient is on the waiting list and the status, such as waiting or scheduled. | Core. |  |
|  |  | The system must provide the ability to create a community nursing care register per organisational institute. | Core. |  |
|  |  | The system should provide the ability to create a care register of individual patients per discipline. | Non-Core. |  |
|  |  | The system must provide the ability to link appointments to actions in a treatment/care plan and rehabilitation plan. | Core. |  |
|  |  | The system must provide the ability to link appointments to a grouping, such as audiology session, that consists of more than one appointment. | Core. |  |
|  |  | The system must provide the ability to allow redirection of patients to the nearest available appointment slot according to business rules. | Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 Resource Availability. 🡪 **Patient Triage.** | The system must provide that ability to manage patient triage to prioritise patients waiting for care. The triage process collects data on arriving patients and categorises and prioritises patients who cannot be seen immediately. It is a dynamic process, as patient priorities change over time. This function can be used in multiple contexts. Note that triage is a process that assigns degrees of urgency to care (prioritises treatment) of patients waiting for care, based on acuity, wait-time, and practitioner load. Its purpose is to enable decisions about the order of treatment when medical care resources are insufficient for treating a number of patients or casualties quickly or at the same time. Triage is used, for example, in mass casualty situations, crowded emergency rooms and walk-in waiting rooms, and to prioritise the use of facilities (e.g. operating theatres) in crowded hospitals. | Core. |  |
|  |  | The system must provide a means to manage a triage acuity rating for a patient. | Core. |  |
|  |  | The system must capture, maintain and render triage acuity ratings derived from standardised acuity scales. | Core. |  |
|  |  | The system must provide the ability to capture and maintain configurable triage acuity ratings according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must present evidence-based triage business rules algorithms during the triage process. | Core. |  |
|  |  | The system must capture and update a triage assignment in response to specific prompts for patient associated data or data already captured in the record (e.g. arrival by ambulance, age, vital signs). | Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 Resource Availability. 🡪 **Patient Health Priority.** | The system must provide the ability to prioritise patients for health services. | Core. |  |
|  |  | The system must provide the ability to tag a patient as a health priority patient due to the patient’s duty priority. (Health service duty priority indicates if a patient belongs to a special group of high priority military duty application personnel). | Core. |  |
|  |  | The system must provide the ability to tag a patient as an oral health priority patient due to clinical priority. (Dental service clinical priority indicates that a patient is classified as oral health risk due to proneness to caries and/or periodontal disease. | Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 Resource Availability. 🡪 **Waiting Room Management.** | The system must enable waiting room management. Waiting room management must be supported by reporting, tracking and alerts to help manage patients who need to wait for care. Waiting room management must support prioritisation decisions by the providers involved, which can be based on patient triage when necessary. | Core. |  |
|  |  | The system must present a list of triaged patients. | Core. |  |
|  |  | The system must provide the ability to present triaged patients filtered and sorted simultaneously by multiple criteria, such as provider, ward, triage acuity rating and wait time. | Core. |  |
|  |  | The system must provide the ability to announce (audible and visible) the next patient in the queue for medical service and then remove the patient from the waiting list/queue. | Core. |  |
|  |  | The system must render an alert when a parameter has been exceeded, such as the number of patients waiting, or the length of wait time. | Core. |  |
|  |  | The system must provide the ability to store information about wait times. | Core. |  |
|  |  | The system must provide e-reception functionality that allows patients, once identified via biometrics (fingerprint), to select the type of appointment that he/she has. | Core. |  |
|  |  | The system must send a notification, containing patient detail and appointment type, to waiting room staff when a patient has reported at reception through biometric identification and selected an appointment type. | Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 Resource Availability. 🡪 **Patient Acuity.** | The system must provide the ability to determine the overall level of patient-acuity to enable the illness/risk-based adjustment of resources for a facility or organisation. Acuity data helps determine appropriate staffing – as modified by the nurses’ level of experience, the organisation’s characteristics, and the quality of clinical interaction between physicians, nurses, and administrators. Whereas patient triage is generally used to prioritise patients waiting for care, patient acuity helps determine appropriate staffing. The latter function may, however, use patient triage to determine the overall level of patient-acuity and severity. | Core. |  |
|  |  | The system must provide the ability to capture (i.e. collect) data to support the patient acuity/severity processes for illness/risk-based adjustment of resources. | Core. |  |
|  |  | The system must provide the ability to provide data to support the patient acuity/severity processes for illness/risk-based adjustment of resources. | Core. |  |
|  |  | The system must render a prompt for the user to provide key data needed to support acuity/severity processes. | Core. |  |
|  |  | The system must provide the ability to determine patient acuity, and/or severity levels. | Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 **Performance.** | The system must support performance functions. | Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 Performance. 🡪 **Performance Monitoring.** | The system must provide the ability to monitor care performance, in order to improve the provision of care by using HER information for measurement, analysis, research and reporting. Care performance monitoring is done on a continuous basis, and periodically provides core performance information to the resource performance function. | Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 Performance. 🡪 Performance Monitoring. 🡪 **Outcome of Care.** | The system must enable monitoring of outcome of care. Information related to patient outcome [of care] must be captured to, *inter alia*: evaluate/analyse, and report on, outcome of care by population, facility, provider or community. Patient care functions must prompt for necessary information in an encounter if it can feasibly be defined in a workflow (e.g. requesting specific info for reporting of emergencies such as drug overdose, suspected abuse, communicable diseases, or for additional research data for a specific diagnosis). | Core. |  |
|  |  | The system must provide the ability to render data required to evaluate patient outcomes. | Core. |  |
|  |  | The system must determine and render data by selection criteria (e.g. physician, facility, facility subsection, clinical research protocol number, or community) to evaluate patient, and/or population outcomes. | Core. |  |
|  |  | The system must provide the ability to capture and maintain outcome measures for a specific patient, and/or groups of patients with a specific diagnosis. | Core. |  |
|  |  | The system must provide the ability to capture and maintain measures to evaluate patient, and/or population outcomes to meet various regional/organisational requirements. | Core. |  |
|  |  | The system must provide for the ability to capture and render unique patient, and/or population outcome data defined to meet regional/organisational requirements. | Core. |  |
|  |  | The system must provide the ability to capture, maintain and render report formats for the export of patient, and/or population outcome data. | Core. |  |
|  |  | The system must provide the ability to capture and maintain notification phrases and prompts in the clinical care setting that would request information needed to comply with regional patient, and/or population outcome measurement requirements when specific triggers are met. | Core. |  |
|  |  | The system must render patient, and/or population outcome data or query results to appropriate organisations (e.g. Quality Measurement organisations, Accreditation organisations) through a secure data service. | Core. |  |
|  |  | The system must provide the ability to tag patients who have been identified as exempt from being included on certain population-based reports (e.g. reports that would exclude the identity of a very important person (e.g. president of a country). | Core. |  |
|  |  | The system must provide the ability to manage data-visibility for patients who have been identified as exempt from being included on certain population-based reports. | Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 Performance. 🡪 Performance Monitoring. 🡪 **Performance Reporting.** | The system must enable performance reporting. Performance reporting uses cost, quality, performance, and accountability measurements for which providers, facilities, delivery systems, and communities are held accountable. Performance reporting reports on issues such as processes, outcomes, cost of care, quality of care, adherence to best practice guidelines, and credential and privilege monitoring. Performance reporting may also process info such as user feedback, patient feedback, surveys, etc. It may manage ad hoc healthcare delivery performance measurements (e.g. Healthcare Effectiveness Data and Information Set (HEDIS), time to aspirin from arrival, or time to antibiotics in pneumonia). | Core. |  |
|  |  | The system must provide the ability to render patient, and/or population data required to assess health quality, performance and accountability measures to appropriate organisations. | Core. |  |
|  |  | The system must provide the ability to capture and maintain multiple data sets required for health care quality, performance and accountability measurements (e.g. the number of flu shots given, or the number of pregnant women counselled to take folic acid). | Core. |  |
|  |  | The system must render patient, and/or population health care quality, performance and accountability measures data in a report format that can be displayed, transmitted electronically, or printed. | Core. |  |
|  |  | The system must determine and render patient, and/or population health care quality, performance and accountability measures in real-time, near real-time or just-in-time according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must determine and render to administrative and financial systems the formula used for measuring patient, and/or population health care quality, performance and accountability measures, according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to process and render info such as user feedback, patient feedback and surveys. | Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 Performance. 🡪 Performance Monitoring. 🡪 **Process Improvement.** | The system should support process improvement with regular reporting of data required for improving the effectiveness and efficiency of care. These reports may include, *inter alia*, specific data such as patient outcomes, patient safety, processes of care, workflow and costs of care. | Non-Core. |  |
|  |  | The system should provide the ability to capture necessary data (e.g. clinical user feedback) supporting organisational efforts to optimise the eHealth system. | Non-Core. |  |
|  |  | The system should provide the ability to capture necessary data (e.g. patient satisfaction feedback, survey feedback) for supporting organisational efforts to improve the quality of healthcare and patient satisfaction. | Non-Core. |  |
|  |  | The system should provide the ability to analyse returned patient survey data and render the results to facilitate improvements in provider-patient interactions, healthcare delivery, etc. | Non-Core. |  |
|  |  | The system should provide the ability to manage realm or organisational relevant health care delivery performance measurements (e.g. HEDIS, time to aspirin from arrival, or time to antibiotics in pneumonia). | Non-Core. |  |
|  |  | The system should provide the ability to manage ad hoc health care delivery performance measurements (e.g. HEDIS, time to aspirin from arrival, or time to antibiotics in pneumonia). | Non-Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 Performance. 🡪 Performance Monitoring. 🡪 **Performance Dashboards.** | The system must provide the ability to monitor (periodically and in real-time) the organisation’s care delivery and performance by means of summary information in dashboards and graphic displays, using selected metrics (performance indicators). The dashboards must use system data to address healthcare system process improvement and care delivery issues. These dashboards must be supported with performance indicators and data-driven feedback mechanisms which, although auto-managed by the system, can sometimes be user-managed (e.g. by overriding system choices). | Core. |  |
|  |  | The system must provide the ability to manage data-driven feedback mechanisms, (e.g. reports, dashboards, watch-boards), that assist in patient management and healthcare delivery. | Core. |  |
|  |  | The system must render real-time departmental load metrics (e.g. nurse-to-patient ratios, emergency department capacity limits), automatically (i.e. without further human intervention). | Core. |  |
|  |  | The system must provide the ability to add new performance indicators to generate ad hoc dashboards and to add dashboards to the list of standard dashboards. | Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 Performance. 🡪 **Resource Performance.** | The system must provide information on the performance of the organisation, organisation units (e.g. facilities such as hospital, clinic, pharmacy/dispensary, laboratory) and individuals (particularly providers and care administrators). The care performance monitoring function provides core performance information to the resource performance function.   1. The veracity of performance information (on any level) obviously depends firstly on the accuracy and completeness of detailed clinical and administrative patient information, and secondly on the relevance and completeness of the performance metrics (also referred to as health performance indicators) being used. ISO 21667 must be used as a framework for such performance metrics. 2. Aspects of employee performance agreements (e.g. balanced scorecards) that relate directly to the core work of providers (and care administrators) must be at least partly based on relevant metrics selected from the set of metrics commonly used for care performance monitoring. | Core. |  |
|  |  | The system must allow for the recording and storage of performance related discussions and interventions as documented, between a supervisor and an employee (provider). | Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 Performance. 🡪 **Cost Performance.** | The system must measure, analyse, and report on, costs incurred by providers, patients, facilities, and other resources. Like care performance monitoring, cost performance monitoring must be done on a continuous basis and must periodically provide core performance information to the resource performance function. | Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 **IC.** | The system must provide the ability to manage, measure, improve and report on IC effectiveness in a care facility. IC is intertwined with all healthcare activities. Health workers follow IC protocols in all activities to prevent harm caused by infection to patients and to themselves. | Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 IC. 🡪 **IC Inspection.** | The system must provide the ability to manage IC inspections. | Core. |  |
|  |  | The system must provide an IC inspection checklist relevant to the area being inspected, that must be used when conducting inspections. | Core. |  |
|  |  | The system should provide the ability to upload photos, adding notes, flagging issues, and assigning follow-up corrective actions to the IC inspection checklist during inspections. | Non-Core. |  |
|  |  | The system must provide the ability to compile and distribute IC inspection reports. | Core. |  |
|  |  | The system must provide that ability to schedule IC inspections (via the resource scheduling function). | Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 IC. 🡪 **IC Surveillance.** | The system must provide the ability to gather, record and analyse healthcare-associated infections (HAI) and report on their occurrences and distribution. Note that more factors that must be observed, recorded, and for which errors must be reported, include blood stream infections (BSI); central line-associated blood stream infections (CLABSI); peripheral line-associated blood stream infections (PLABSI); catheter-associated urinary tract infections (CAUTI); surgical site infections (SSI); and ventilator-associated pneumonias (VAP). | Core. |  |
|  |  | The system must collect data on the number of device days/surgeries at all clinical areas to enable calculation of HAI rates. | Core. |  |
|  |  | The system should record patient safety incidents (PSI) and pass the information to the National Department of Health (NDoH) information system by means of the health services reports function. | Non-Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 IC. 🡪 **IC Performance and Trends.** | The system must analyse IC inspection and surveillance results of current and previous inspections and present IC trends, performance and improvements on a real-time performance dashboard. | Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 IC. 🡪 **IC Reporting.** | The system must provide the ability to report the following:   1. IC relevant information required in terms of the Department of Health (DoH) National Infection Prevention and Control Strategic Framework, March 2020. 2. Quarterly IC surveillance reports to the National DoH. 3. HAIs and PSIs within the organisation and to the National DoH. 4. Notifiable medical conditions (NMC) to the National Institute of Communicable Diseases (NCID) as per the National Health Act, 2003. | Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 IC. 🡪 **Cleaning.** | The system should provide the ability to prepare cleaning schedules for all areas in healthcare facilities. (Resource scheduling function requirement). | Non-Core. |  |
|  |  | The system should enable cleaners to sign-off (electronic signature) each cleaning job, with a capability for the manager to confirm verification. | Non-Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 **OHS.** | The system must provide the ability to manage OHS. The objective of the OHS function is to minimise risks to employees and others who are exposed to OHS hazards associated with organisation’s activities. The OHS function seeks to continuously improve the prevention of work-related injury and ill health to workers through safe and healthy workplaces. | Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 OHS. 🡪 **Hazard identification and risk assessment (HIRA).** | HIRA initiates the OHS process. A document (referred to as the ‘HIRA’) is created at organisation unit level and submitted by the OHS coordinator from a division. The HIRA includes an occupational risk exposure profile (OREP), which specifies, per workplace, the key requirements of each occupation and the key hazards (risks) to which employees in that occupation are exposed. | Non-Core. |  |
|  |  | The system should provide a HIRA template to be used by OHS coordinators at organisational unit level to record identified workplace risks and hazards. | Non-Core. |  |
|  |  | The system should be designed such that other role-players such as the occupational hygiene services are able to review and edit (add comments or questions) on what was recorded by the OHS co-ordinator. | Non-Core. |  |
|  |  | The system should make provision for analysis of the content of the captured HIRA information. | Non-Core. |  |
|  |  | The system should make provision for recording, scheduling and monitoring of the planned risk mitigation interventions. | Non-Core. |  |
|  |  | The system should provide the ability to assign schedule and monitor risk controls. | Non-Core. |  |
|  |  | The system should provide a repository to maintain OREP data. | Non-Core. |  |
|  |  | The system should be able to send notifications to employees within a specific OREP group when a threat has been established. | Non-Core. |  |
|  |  | The system should ensure that the OREP information is accessible for the purpose of the healthcare surveillance function. | Non-Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 OHS. 🡪 **Healthcare Surveillance.** | The system must enable the administration of generic and occupational personal health risk assessment (OPHRA) at different stages of the employee lifecycle. The Healthcare Surveillance assessments considered include, but are not limited to: Pre-employment, Pre-placement, Periodic, Resumption, Exit and Legislated Healthcare Surveillance. | Core. |  |
|  |  | The system must provide the ability to capture a prospective employee’s health status information with an option to add and store an attachment to accommodate cases where a medical certificate has been supplied by previous employer. | Core. |  |
|  |  | The system must provide the ability to capture pre-placement assessments. The system must have a repository of health fitness assessments that are linked to specific occupation profiles. | Core. |  |
|  |  | The system must be able to automatically schedule pre-planned periodic assessments. | Core. |  |
|  |  | The system must be able to send notifications and reminders for upcoming fitness assessments. | Core. |  |
|  |  | The system must provide a calendar and time features to an employee to select time and date on which they will take the assessment. | Core. |  |
|  |  | The system assessment calendar (mentioned above) must be integrated with the provider/assessor’s calendar to ensure seamless scheduling process. | Core. |  |
|  |  | The system must generate assessment reports that reflect the fitness status of an employee, e.g. suitable to work report. | Core. |  |
|  |  | The system must issue medical certificates. | Core. |  |
|  |  | The system must have a capability for capturing of a resumption report for an employee who was booked off work due to an occupational incident. | Core. |  |
|  |  | The system must have a time event trigger to initiate an assessment scheduling within a specified number of days before a definitive retirement, termination and transfer date. | Core. |  |
|  |  | The system must issue an exit medical certificate. | Core. |  |
|  |  | : The system must make provision for medical assessments required by the governing body of a profession or trade, the outcome of which must be recorded on a form prescribed by the aforesaid governing body. | Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 OHS. 🡪 **Occupational Injury and Disease Admin.** | Compensation for occupational injury and disease administration (COIDA) is done in conformance to the Compensation for Occupational Injuries and Diseases Act, No 130 of 1993. It applies after a patient has sustained an injury or contracted a disease. | Core. |  |
|  |  | The system must be able to send workflow notifications to all role-players who are involved in COIDA, including Human Capital Management (HCM) and the treating providers. | Core. |  |
|  |  | The system must have a repository where employees and providers may access the procedure to be followed and all the relevant forms as prescribed by the Act. | Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 OHS. 🡪 **OHS Compensation Fund Claims.** | The system should provide reports on SANDF OHS claims statistics and monies spent on claim pay-outs. | Non-Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 OHS. 🡪 **OHS Audit and Inspection.** | The system should have an audit and inspection checklist that is aligned with OHS legislation, regulations and industry-specific requirements. | Non-Core. |  |
|  |  | The system should enable the capturing, storing and disseminating of OHS audit and inspection reports amongst identified responsible individuals. | Non-Core. |  |
|  |  | The system should make provision for inclusion of attachments in various agreed to formats. | Non-Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 OHS. 🡪 **Incident Management.** | Incident management records detail regarding workplace-related injuries, illnesses, incidents that have the potential to cause illness or injuries such as environmental spills, unsafe behaviour and dangerous workplace conditions. | Core. |  |
| 1. . |  | The system must have capability for recording, analysing, tracking and reporting of workplace-related incidents, injuries and illnesses. | Core. |  |
|  |  | The system should make provision for capturing and scheduling improvement initiatives and responsible party particulars. | Non-Core. |  |
|  |  | The system must have a workflow function that sends automated alerts from initiation to closure. | Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 OHS. 🡪 **OHS Calendar.** | OHS calendar is used to plan OHS activities and events for a year. The resource scheduling function can be used for this purpose. | Non-Core. |  |
|  |  | The system should have a calendar feature that allows easy importing of events from other sources such as staff calendar or departmental year planner and exporting of content from the calendar in various agreed to formats. | Non-Core. |  |
|  |  | The system should have distinctive identifiers for various forums and hyperlinks to their agendas, minutes and any information they wish to share amongst themselves and with target audience through the calendar feature. | Non-Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 OHS. 🡪 **OHS Performance.** | The system should be able to measure performance of the OHS function and provide an overall view of OHS activities and their impact, expenditure towards control measures and rehabilitation expenditure. | Non-Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 OHS. 🡪 **OHS Education.** | OHS education entails safety meetings and training courses, which are tracked in terms of attendees, area, and time period. It includes OHS awareness training for purposes of health promotion and accident/illness prevention. | Non-Core. |  |
|  |  | The system should have a learning portal with a repository for training courses with attendance schedules, target occupational groups and course duration. | Non-Core. |  |
|  |  | The system should be able to send notifications to prospective attendees to confirm enrolment. | Non-Core. |  |
|  |  | The system should keep attendance records for both historical and planned upcoming training. | Non-Core. |  |
|  |  | The system should allow for the attendance record to be exported into various agreed upon file formats. | Non-Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 OHS. 🡪 **OHS Procedures.** | The system should have a centralised knowledge base where OHS procedure documents and related material (e.g. emergency evacuation plans, safety protocols, etc) will be stored and accessed. | Non-Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 OHS. 🡪 **OHS Communication System.** | The system should enable OHS team members to log and share shortcomings and issues pertaining to OHS within different arms of service and divisions. | Non-Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 **WM.** | The system should provide the ability to support WM. WM ensures the safe collection, disposal, and recording of medical waste. It also analyses recorded information in order to improve WM and identify risks. | Non-Core. |  |
|  |  | The system must enable medical waste management in accordance with RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 WM. 🡪 **WM Planning.** | The system should have a visual guide with the varying waste disposal categories to support the waste segregation process. | Non-Core. |  |
|  |  | The system should enable accurate waste collection planning (through resource scheduling). | Non-Core. |  |
|  |  | The system should have a shared knowledge or information sharing repository where staff can access SLAs, Policies and Procedures for waste transport and storage, the waste management plan and the written plan to identify and handle all waste generated in the facility. | Non-Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 WM. 🡪 **WM Recording.** | The system should have capability for recording clinical waste information such as the source medical areas that generate waste, the disposal category of waste, quantities of waste, date and time of closure of the waste bag, and the name of the person labelling the bag with the aforesaid information, can be stored. | Non-Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 WM. 🡪 **WM Analysis.** | The system should provide the ability to analyse a facility’s historical WM information in order to identify risks and to improve efficiency. | Non-Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 WM. 🡪 WM Analysis. 🡪 **WM Calculations.** | The system should have a capability for calculating waste subtotals for given time periods; yearly waste quantity totals; waste load; weight ratio of waste recycled or reusable, etc. | Non-Core. |  |
|  |  | The system should be able to generate real-time report of the waste totals at any given point in time. | Non-Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 WM. 🡪 WM Analysis. 🡪 **WM Comparison**. | The system should provide the ability to identify and record anomalies through comparison of WM information between departments/medical areas that provide similar services, or between different time periods for a particular location. These comparisons highlight problems such as poor waste segregation and unauthorised reuse (e.g. reuse of syringes and needles). | Non-Core. |  |
|  |  | The system should have the capability to notify relevant role players of WM anomalies. | Non-Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 WM. 🡪 **WM Reporting.** | The system should generate a report on the efficiency of the WM facility, including shortcomings of each facility. | Non-Core. |  |
|  |  | The system should keep record of and report on competency assessments conducted and training (e.g. waste classification, waste segregation, waste management etc) provided to providers, facility staff and waste transport workers. | Non-Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 WM. 🡪 **WM Incidents.** | The system must provide the ability to record and document waste management incidents. Waste management incidents include spills and incidents that contravene healthcare risk waste management operating procedures. | Non-Core. |  |
|  |  | The system must provide the ability to link employees that were exposed to a spill to the incident. | Non-Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 **Healthcare Supply Chain.** | The eHealth system requirement for healthcare supply chain only addresses stock control / inventory management at healthcare facilities and interfacing with the existing DOD logistical system. | Core. |  |
|  |  | The system must provide the ability to manage minimum and maximum stock levels per facility. | Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 Healthcare Supply Chain. 🡪 **Inventory Management.** | The system must have an inventory management capability to ensure effective monitoring of medical supplies, drugs. | Core |  |
|  |  | The system must be able to link the inventory management component to external systems such as the existing DOD supply chain system. | Core |  |
|  |  | The system must be able to keep track of stock levels and send notifications when the minimum re-order stock levels are reached. | Core |  |
|  |  | The system must keep real-time information of available stock. | Core |  |
|  |  | The system must keep record of stock requestor and stock issue with date, time and location of where the transaction took place. | Core |  |
|  |  | The system must provide the ability to manage stock exchange between facilities, e.g. when one hospital ward requests and receives stock from another hospital ward, or stock exchange between pharmacies, clinics, etc. | Core, |  |
|  |  | The system must make provision for corporate visibility of stock across facilities. | Core. |  |
|  |  | The system must provide the ability to track in real-time the usage of medical supplies, such as bandages, medications, IV fluids, surgical kits. | Core. |  |
|  | Care Resources. 🡪 Facility Support. 🡪 **Quality Control.** | The system should provide the ability to record various healthcare and facility related quality control activities and information. | Non-Core. |  |
|  | Care Resources. 🡪 **Facilities.** | The system must provide the ability to manage healthcare facility data required to assess health care quality, performance and cost. Care facility includes all sickbays, military medical rooms, military base hospitals, military hospitals, medical battalion groups, field hospitals, institutes, and ambulances. A care facility may consist of one or more care facilities. At the lowest level in the hierarchy of the care facility is service points. This document treats service points as care facilities. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 **Facility Registry.** | The system must provide the ability to manage the care facility registry.  Information stored per care facility must include:   1. care facility identification; 2. care facility name; 3. care facility address; 4. care facility static GPS coordinates; 5. dynamic GPS coordinates with dates and time for care facilities that move around such as ambulances and mobile units; 6. indication if the care facility is internal to SAMHS or external; 7. care facility status such as power outage, flooded, overcapacity and loss of accreditation; 8. care facility type such as hospital, consulting room, doctor’s office, laboratory, radiology rooms, hospital, clinic, pharmacy/dispensary, theatre, kitchen, hospital ward, hospital room, hospital bed, service point; 9. visual map with clear descriptions (e.g. L2SW Ward 6). 10. capacity of the care facility; 11. specific healthcare disciplines available at the care facility; 12. care facility availability status, 13. care facility performance information, 14. care facility WM plan. | Core |  |
|  | Care Resources. 🡪 Facilities. 🡪 **Hospital.** | The system must provide the ability to manage hospital care, hospital care admin and hospital resource admin. The hospital functionality requirement is reflected in this specification as a composite function, consisting of functions that are unique to a hospital as well as functions that are common and therefore sharable by various functions. In the hospital function list below, items in green font are common functions used by hospital, whereas the rest are hospital-unique functions. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Hospital. 🡪 **Hospital Care and Admin.** | The system must provide the ability to manage patient-centred hospital care and admin. Hospital care and admin is patient-centred and includes clinical and related admin functions. Its core admin function is patient care admin, which takes place alongside, and in tandem with, hospital care. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Hospital. 🡪 Hospital Care and Admin. 🡪 **Pre-admission.** | The system must provide the ability to manage pre-admission. | Core. |  |
|  |  | The system must provide the ability to receive hospital admission orders (via the order tracking function) for a specified patient, which triggers the pre-admission process. Where possible, information in the admission order must be used to enable pre-admission instructions, pre-admission assessments and to initiate admission tasks that can be done before the admission date to accelerate the admission process. | Core. |  |
|  |  | The system must provide the ability to send pre-admission instructions to prepare the patient for hospital stay. Preparations at home before admission and other required instructions must be communicated to the patient via the provider-patient communication function. | Core. |  |
|  |  | The system must provide the ability to generate a prescription through the medication orders function if medication needs to be taken in preparation for the hospital stay. | Core. |  |
|  |  | The system must provide the ability to manage pre-admission assessments which may be required for certain planned hospital admissions. This entails recording the results of, pre-admission assessments using the assessment function requirement described under patient care. An assessment may include pathology and radiology tests, arranged via the non-medication order function. | Core. |  |
|  |  | The system must provide the ability to place orders for pathology and radiology tests, via the non-medication order function as part of pre-admission assessments, if required. | Core. |  |
|  |  | The system must provide the ability to perform admin tasks for admission that can be done before the admission date in order to reduce admin on the day of actual hospital admission. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Hospital. 🡪 Hospital Care and Admin. 🡪 **Admission.** | The system must provide the ability to manage hospital admissions. | Core. |  |
|  |  | The system must provide the ability to admit a patient to a specific facility. | Core |  |
|  |  | The system must provide the ability to register a patient (if required), and to record or confirm information such as a patient’s demographics, preferences, relevant relationships (e.g. to a proxy), advance directives, consent, and authorisation as specified as part of the patient care admin function requirement. | Core. |  |
|  |  | The system must provide the ability to confirm, record or update the patient’s medication list, allergies, previous medical procedures, illnesses, health factors, problems such as chronic conditions and medical devices, for example prosthetic devices, as described under the clinical history function requirement. | Core. |  |
|  |  | The system must provide the ability to confirm and update patient demographics, including next of kin. | Core |  |
|  |  | The system must provide the ability to admit a lodger with a patient. Lodger identity and relationship to the patient must be recorded and linked to the admitted patient’s EHR. | Core. |  |
|  |  | The system must provide the ability to manage a standard hospital admission assessment and clinical measurements of the patient being admitted. The assessments function (which is described as part of clinical documentation) is used. | Core. |  |
|  |  | The system must provide the ability to confirm the medical diagnosis or purpose for the hospital admission as part of hospital admission assessment. | Core. |  |
|  |  | The system must provide the ability to place medication orders at admission of the patient, for the hospital stay to the hospital pharmacy/dispensary by means of the medication orders function. Administering of medication is scheduled for the patient. | Core. |  |
|  |  | The system must provide the ability to schedule administering of medication ordered during admission. | Core. |  |
|  |  | The system must provide the ability to orientate patients and relatives regarding the relevant hospital unit or ward, and to inform them regarding visiting hours, patient rights and responsibilities through the provider-patient communication function. | Core. |  |
|  |  | The system must provide the ability to notify the hospital kitchen when a patient is admitted. | Core. |  |
|  |  | The system must provide the ability to notify the hospital kitchen when a lodger is admitted with a patient. | Core. |  |
|  |  | The system must provide the ability to place a diet order (as described under the diet orders function) if diet information is available at the time of admission. | Core. |  |
|  |  | The system must provide the ability to accommodate the patient’s belongings and home medication that could not be sent home with the patient’s relatives as described under patient belongings admin function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Hospital. 🡪 Hospital Care and Admin. 🡪 **Patient Bed Allocation.** | The system must provide the ability to manage patient bed allocation. Patient bed allocation function must assign to an identified patient a specific bed in a specific ward (via the resource allocation function). The system must ensure that a patient’s bed assignment optimises care and minimises risk (e.g. of exposure to contagious patients; need for a room with special equipment; or need to be close to the nursing station or in a private room). Patient bed allocation is required within admission as well as patient transfer. It can also be used independently of these functions. | Core. |  |
|  |  | The system must provide the ability to manage patient bed assignment interactions that are internal or external to the system (e.g. including temporary bed assignments). | Core. |  |
|  |  | The system should transmit patient information to an external system that will facilitate bed assignment, care optimisation and risk mitigation. | Non-Core. |  |
|  |  | The system must provide the ability to render lists of information to help enable effective bed assignment, including at a minimum, list of patients currently within the facility, a list of empty rooms and a list of available patient care spaces. | Core. |  |
|  |  | The system must provide the ability to render lists of information on patient status to help enable effective bed assignment, including at a minimum, a list of patients waiting to be triaged, a list of patients waiting to be registered, and a list of patients that have been admitted to the facility but are queued up for a transition of care. | Core. |  |
|  |  | The system must provide the ability to render waiting time for patients not yet brought to a treatment area. | Core. |  |
|  |  | The system must provide the ability to render the number of patients that have been admitted to the facility but are queued up for a transition of care. | Core. |  |
|  |  | The system must provide the ability to render information on incoming transported patients (e.g. rescue in-bounds). | Core. |  |
|  |  | The system must provide the ability to manage re-location of patients. | Core. |  |
|  |  | The system must provide the ability to separately manage multiple patients being simultaneously cared for in a single room or identified space according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must provide the ability to manage temporary beds and the patients in the temporary beds according to RSA industry standards, scope of practice, organisational policy, and/or jurisdictional law. | Core. |  |
|  |  | The system must tag with a status indication that the patient is ready for a transition of care (e.g. transport to an inpatient bed). | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Hospital. 🡪 Hospital Care and Admin. 🡪 **Patient Care Admin [Hospital].** | The system must provide the ability to manage hospital patient care admin. Patient care admin is a common function and is described under patient care. For any particular patient, patient care admin (which is the core of hospital patient admin), takes place alongside, and in tandem with, hospital care which occur within an encounter/episode of care. The encounter/episode of care provides the administrative framework within which clinical functions (of care provision) are performed. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Hospital. 🡪 Hospital Care and Admin. 🡪 **Hospital Care.** | The system must provide the ability to support hospital care that is rendered directly (face-to-face) to inpatients and patients in emergency care. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Hospital. 🡪 Hospital Care and Admin. 🡪 Hospital Care 🡪 **Bedside verification.** | Bedside verification allows caregivers to utilise barcode / QR Code scanning technology to confirm patient identity and medication information prior to administering medications and blood products. | Core. |  |
|  |  | The system must make provision for barcode / QR Code scanning as a form of patient verification. | Core. |  |
|  |  | The system must make provision for the use of a barcode/QR Code scanner to identify blood products and unit information including unit blood type and product. | Core. |  |
|  |  | The system must have an intelligence capability that allows for accurate reconciliation of the correct blood product with the correct blood type being administered to the patient. | Core |  |
|  | Care Resources. 🡪 Facilities. 🡪 Hospital. 🡪 Hospital Care and Admin. 🡪 Hospital Care. 🡪 **Inpatient Care.** | For inpatient care, the system must provide the ability to render and record general clinical care to patients. Hospital inpatient care makes full use of the patient care provision function, but uniquely also renders nursing care. | Core. |  |
|  |  | The system must provide the ability to manage nursing care. Nursing care typically involves tasks such as the following: nursing care records and reports; medication administration (non-intravenous and intravenous) and monitoring for, and recording, side effects and reactions; prescribing assistive medical devices and related treatments; recording patient vital signs and medical information; ordering medical diagnostic and clinical tests; monitoring and recording symptoms or changes in patient conditions; implementing nursing care plans with health team members; and modifying treatment plans according to patient conditions and responses. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Hospital. 🡪 Hospital Care and Admin. 🡪 Hospital Care. 🡪 **Critical Care.** | The system must provide the ability to render and record clinical care to patients in critical care units (CCUs) i.e. intensive care units (ICUs) and high-care units (HCUs). ICUs and HCUs utilise the same functions. The patient care provision function requirement, described under patient care is applicable to hospital critical care. | Core. |  |
|  |  | The system must provide the ability to manage CCU diagnosis which entails making diagnoses, decision-making and follow-up treatment planning by considering all patient tests and measurements during ICU or HCU stay, individually as well as holistically. | Core. |  |
|  |  | The system must provide the ability to present patient measurements and test results in support of CCU diagnosis, as an all-inclusive view, visualised numerically and graphically, and in an intuitive order to facilitate diagnoses, decision making and follow-up treatment planning. | Core. |  |
|  |  | The system must provide the ability to utilise the following data sources to present an all-inclusive view in support of CCU diagnosis: patient monitoring systems, main therapeutic and organ support systems like ventilators or hemofiltration, arterial blood gas (ABG) and other PoC testing devices, laboratory information systems, PACS, any automated external defibrillator (AED) electronic records and the patient’s HER. | Core. |  |
|  |  | The system must provide the ability to record and render ICU and HCU statuses, including unfavourable trends and isolated incidents. | Core. |  |
|  |  | The system must provide live reports on the main statistics and important events/figures pertaining to ICU and HCU functioning via performance dashboards (refer to performance dashboard requirement). | Core. |  |
|  |  | The system must have an ability to present CCU status information which includes trends in mortality, morbidity, complications, organ failure, ICU and HCU LOS, ventilator days, procedures, equipment and other resources used per bed. This information must be reflected for the ICU as a whole, the HCU as a whole and also per pre-defined patient groups within ICU and HCU. | Core. |  |
|  |  | The system must provide the ability to reflect CCU status information for the ICU as a whole, the HCU as a whole and also per pre-defined patient groups within ICU and HCU. | Core. |  |
|  |  | The system must provide the ability to allocate and schedule resources for ICU and HCU operations. Refer to resource allocation and resource scheduling function requirements. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Hospital. 🡪 Hospital Care and Admin. 🡪 Hospital Care. 🡪 **Theatre.** | The system must provide the ability to manage theatre patient care which entails common functions, patient care and facility support. | Core. |  |
|  |  | The system must provide the ability to keep a register of procedures performed per theatre, per day and related staff. | Core. |  |
|  |  | The system must provide the ability to assign theatre time (from an order list or waiting list) according to predetermined rules. (May be done by utilising common functions resource allocation and resource scheduling). | Core. |  |
|  |  | The system must provide the ability to alter theatre schedules to accommodate emergencies, cancellations and postponements. (May be done by utilising common functions resource allocation and resource scheduling). | Core. |  |
|  |  | The system must provide the ability to assign theatre equipment, instruments and material for the procedure to be performed in the operation theatre. (May be done by utilising common functions resource allocation and resource scheduling). | Core. |  |
|  |  | The system must provide the ability to assign theatre personnel required for the procedure to be performed. (May be done by utilising common functions resource allocation and resource scheduling). | Core. |  |
|  |  | The system must provide the ability to order (and track) sterile surgical packs (from Central Sterile Supply Department (CSSD) and medication required for the surgical procedure (from the Pharmacy/Dispensary). (It may be done by utilising the common function, orders). | Core. |  |
|  |  | The system must support provision of anaesthesia by enabling anaesthesia-related assessment of a patient before, during and after surgery. (Refer to the common function, assessments). | Core. |  |
|  |  | The system must provide the ability to order tests, procedures and medication required for anaesthetics purposes. (Refer to the common function, orders). | Core. |  |
|  |  | The system must provide the ability to record drug administration for anaesthetic purposes. (Refer to common function, medication administration). | Core. |  |
|  |  | The system must provide the ability to document the anaesthetics procedure. (Refer to common function, encounter documentation). | Core. |  |
|  |  | The system must support provision of surgical procedures by enabling surgical-procedure-related assessment of a patient before, during and after surgery. (Refer to the common function, assessments). | Core. |  |
|  |  | The system must provide the ability to order tests, procedures and medication required for surgical procedures. (Refer to the common function, orders). | Core. |  |
|  |  | The system must provide the ability to record drug administration during surgical procedures. (Refer to common function, medication administration). | Core. |  |
|  |  | The system must provide the ability to document perioperative procedures and checklists. (Refer to common function, encounter documentation). | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Hospital. 🡪 Hospital Care and Admin. 🡪 Hospital Care. 🡪 Theatre. 🡪**Inventory Control.** | The system must provide the ability to control theatre inventory. | Core |  |
|  |  | The system must generate a theatre list based on what was specified and ordered at the time the appointment was booked. | Core |  |
|  |  | The system must present a consolidated theatre list by e.g. theatres, dates, surgeons, specialty, and sorts by inventory, inventory location or materials management location. | Core |  |
|  |  | The system must support Just-in-time inventory | Core |  |
|  | Care Resources. 🡪 Facilities. 🡪 Hospital. 🡪 Hospital Care and Admin. 🡪 Hospital Care. 🡪 **Emergency Care.** | The system must provide the ability to manage emergency care. Emergency care is rendered to patients and administrated in what is referred to as the emergency room or casualty or emergency department of the hospital. | Core. |  |
|  |  | The system must provide that ability to manage patient triage to prioritise patients waiting for emergency care according to the severity of their condition. (Refer to the common function, patient triage). | Core. |  |
|  |  | The system must enable emergency care waiting room management when a large number of patients are needing treatment. (Refer to common functions waiting room management and patient triage). | Core. |  |
|  |  | The system must provide the ability to register emergency care patients if not yet registered as a patient in the system. (Refer to the common function, patient admin record). | Core. |  |
|  |  | The system must provide the ability to record and if possible, confirm the patient’s demographics, preferences, relevant patient relationships (e.g. to a proxy), advance directives, consent and authorisation during emergency care provision. (Refer to the common function, patient admin record). | Core. |  |
|  |  | The system must provide the ability to record and confirm the patient’s medication list, allergies, previous medical procedures, illnesses, health factors, problems such as chronic conditions and medical devices, such as prosthetic devices during emergency care provision. (Refer to the common function, clinical history). | Core. |  |
|  |  | The system must support provision of emergency treatment. (Refer to common function patient care that consist of patient care provision and patient care admin). | Core. |  |
|  |  | The system must provide the ability to render information in support of emergency patient re-evaluation and to record emergency care re-evaluation. A patient’s condition in conjunction with an interpretation of pathology and radiology test results (if applicable) are required for emergency care re-evaluation. Re-evaluation gives the provider more information for altering treatment and deciding whether to discharge the patient after treatment or admit the patient to hospital for further treatment. | Core. |  |
|  |  | The system must provide the ability to give home-care instructions to the patient upon emergency care discharge. (Refer to the common function provider-patient communication). | Core. |  |
|  |  | The system must provide the ability to schedule a follow-up appointment at the emergency care discharge event. (Refer to the common function resource scheduling). | Core. |  |
|  |  | The system must provide the ability to admit a patient to hospital for further care at the event of emergency care discharge. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Hospital. 🡪 Hospital Care and Admin. 🡪 **Patient Transfer.** | The system must provide the ability to manage patient transfers. Patient transfer entails discharging a patient from one department/unit and admitting the patient to another, which marks a change in responsibility for the patient. A patient, for example is transferred from the medical to the surgical department. | Core. |  |
|  |  | The system must provide the ability to complete outstanding patient issues that need to be dealt with prior to a transfer. (Refer to common function care transitions and discharges). | Core. |  |
|  |  | The system must provide the ability to manage bed-allocation for intra-hospital transfers. (Refer to patient bed allocation function). | Core. |  |
|  |  | The system must provide the ability to transfer all patients of a complete facility, such as transferring all patients from one hospital ward to another hospital ward (group of patients and not patient by patient individually). This functionality is specifically required when two wards are merged. | Core. |  |
|  |  | The system must provide the ability to record an accompanying provider, if a provider is assigned to accompany the patient during patient transfer. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Hospital. 🡪 Hospital Care and Admin. 🡪 **Kitchen.** | The system must provide the ability to manage hospital kitchen functions. | Core. |  |
|  |  | The system must provide the ability to receive and process orders for diets. | Core. |  |
|  |  | The system must provide the ability to prepare customised menus per patient, within the ordered diet parameters, to be used by the meal orders function. | Core. |  |
|  |  | The system must ensure that at least one diet order per patient and per lodger is received at the beginning of a patient’s hospital stay. | Core. |  |
|  |  | The system must provide the ability to manage replacement diet orders during the hospital stay when a patient’s diet is changed by a provider. | Core. |  |
|  |  | The system should provide the ability to compile a list of ingredients required to prepare food as per customised patient menus. | Non-Core. |  |
|  |  | The system must provide the ability to receive and process meal orders. | Core. |  |
|  |  | The system should provide the ability to track a meal order from order receipt to delivery, to a returned food tray in the kitchen. | Non-Core. |  |
|  |  | The system must provide the ability to record quality verification that the prepared meal to be delivered corresponds with the applicable meal order and that it is delivered to the correct patient. | Core. |  |
|  |  | The system must provide the ability to present statistics on meal orders received and filled per any given time period. (Refer to the information view function). | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Hospital. 🡪 Hospital Care and Admin. 🡪 **Discharge.** | The system must provide the ability to administrate the discharge of a patient from hospital when the patient’s treatment ends. | Core. |  |
|  |  | The system must provide the ability to record the ending of the patient’s relationship with the hospital, for example, with a “completed” status and with discharge information that includes one or multiple discharge diagnosis, the date and time of discharge. | Core. |  |
|  |  | The system must provide the ability to obtain patient signature (electronic signature) for the release of the provider and hospital from legal liability for his/her health condition when a patient leaves the hospital against medical advice. Such a patient is informed of possible risks via the provider-patient communication function. | Core. |  |
|  |  | The system must provide the ability to inform a patient of possible risks via the provider-patient communication function when a patient leaves the hospital against medical advice. | Core. |  |
|  |  | The system must provide the ability to administrate outstanding patient issues at discharge. Refer to the care transitions and discharge function requirement. | Core. |  |
|  |  | The system must provide the ability to recommend continuing care of a patient by means of the care recommendations function. | Core. |  |
|  |  | The system must provide the ability to verify the use of planned resources and to calculate the total cost of the patient’s hospital stay. | Core. |  |
|  |  | The system must provide the ability to indicate the total cost of a patient’s hospital stay in a cost report (created by the cost performance function). | Core. |  |
|  |  | The system must have the ability to provide home-care instructions to the patient via the provider-patient communication function once discharged. | Core. |  |
|  |  | The system must provide the ability to produce a discharge report and to distribute the report to pre-determined destinations according to organisational policy. Refer to the summary record of care function requirement. | Core. |  |
|  |  | The system must provide the ability to record the return of patient belongings to the patient that were handed in for safe keeping. Refer to the patient belongings admin function requirement. | Core. |  |
|  |  | The system should provide the ability to administrate patient belongings left behind. Refer to the patient belongings left behind function requirement. | Non-Core. |  |
|  |  | The system must provide the ability to notify the kitchen when a patient/lodger is discharged via the workflow management function. | Core. |  |
|  |  | The system must provide the ability to send hospital discharge date and time to the DOD HR system per patient (employee) | Non-Core. |  |
|  |  | The system must provide the ability to notify the DOD Unit where a patient is employed when a patient is discharged. | Non-Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Hospital. 🡪 Hospital Care and Admin. 🡪 **Invoicing [Hospital].** | The system must provide the ability to invoice a patient when, or shortly after, the patient is discharge from hospital. Refer to the invoicing function requirement. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Hospital. 🡪 **Hospital Resource Admin.** | The system must provide the ability to manage hospital resource admin. Hospital resource admin is operation centred, which means that it administrates the resources of the hospital to enable it to operate as a healthcare facility. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Hospital. 🡪 Hospital Resource Admin. 🡪 **Care Providers [Hospital].** | The system must provide the ability to manage and provide information about providers who work in a hospital. Refer to the care providers function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Hospital. 🡪 Hospital Resource Admin. 🡪 **External Facility Status [Hospital].** | The system must provide the ability provide and maintain information regarding status changes of external facilities on which the hospital relies for healthcare service delivery. Refer to the external facility status function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Hospital. 🡪 Hospital Resource Admin. 🡪 **Equipment and Devices [Hospital].** | The system should provide the ability to record and manage electronic devices used in the hospital. If performed centrally, this function must still be available for use within the hospital for enquiry and planning purposes. Refer to the equipment and devices function. | Non-Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Hospital. 🡪 Hospital Resource Admin. 🡪 **Resource Availability Status [Hospital].** | The system must provide the ability to continually maintain hospital resource information. Refer to the resource availability status function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Hospital. 🡪 Hospital Resource Admin. 🡪 **Resource Allocation [Hospital].** | The system must provide the ability to manage hospital resource allocation. Refer to the resource allocation function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Hospital. 🡪 Hospital Resource Admin. 🡪 **Resource Scheduling [Hospital].** | The system must provide the ability to schedule hospital resources, e.g. to schedule theatres and other facilities within the hospital, and to schedule nursing staff for duty. Refer to the resource scheduling function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Hospital. 🡪 Hospital Resource Admin. 🡪 **Performance [Hospital].** | The system should provide the ability to monitor and improve the provision of hospital care, to measure the performance of the hospital, its personnel, and facilities, and to monitor care-related costs. Refer to the performance function. | Non-Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Hospital. 🡪 Hospital Resource Admin. 🡪 **Linen and Laundry.** | The system must provide the ability to manage hospital linen and laundry. The main purpose of this function is to provide clean material to patients and ensure that hygienic conditions are maintained in the process. It entails collection of soiled linen, sorting and processing, inspecting and repairing or replacing damaged material, distributing clean linen to the various user departments. | Non-Core. |  |
|  |  | The system should provide the ability to maintain a register of hospital linen stock. (refer to inventory management requirement) | Non-Core. |  |
|  |  | The system should provide the ability to record daily transactions that reflect interactions with wards, operating theatres and other hospital environments. | Non-Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Hospital. 🡪 Hospital Resource Admin. 🡪 **IC [Hospital].** | The system must provide the ability to manage, measure, improve and report on IC effectiveness in a hospital. Refer to the IC function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Hospital. 🡪 Hospital Resource Admin. 🡪 **WM [Hospital].** | The system should provide the ability to manage safe collection, disposal and recording of hospital medical waste. Refer to the WM function. | Non-Core. |  |
|  |  | The system should provide the ability to analyse recorded hospital WM information in order to improve WM and to identify risks. | Non-Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 **Clinic.** | The system must provide the ability to manage clinic care, clinic care admin and clinic resource admin. The clinic function essentially consists of Clinic care and admin function and Clinic resource admin function. In addition to clinical care, clinics render social care, which includes support and services to groups, individuals, and families that are challenged with terminal, acute, or chronic illness; promotion of health, and helping patients to access better healthcare. Clinic functions are applicable to Military Medical Rooms (MMR), Medical Health Centres (MHC) and sickbays. In the clinic function list below, items in green font are common functions used by clinic, whereas the rest are clinic-unique functions. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Clinic. 🡪 **Clinic Care and Admin.** | Clinic care and admin is patient-centred and includes clinical and related admin functions. Its core admin function is patient care admin, which takes place alongside, and in tandem with, clinic care. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Clinic. 🡪 Clinic Care and Admin. 🡪 **Resource Scheduling [Clinic].** | The system must provide the ability to schedule patient appointments which apply to the clinic itself, as well as mobile clinics and community visits. (Refer to resource scheduling function). | Core. |  |
|  |  | The system must enable multiple routine appointments as required, for example, by patients with chronic conditions, and for maternal, child and woman’s health (MCWH). | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Clinic. 🡪 Clinic Care and Admin. 🡪 **Waiting Room Management [Clinic].** | The system must have a waiting room management function, which is described as part of the common function, resource availability (waiting room management), in order to keep track of walk-in patients or patients who need urgent treatment. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Clinic. 🡪 Clinic Care and Admin. 🡪 **Clinic Care.** | The system must provide the ability to manage clinic care. A clinic typically provides patients with selected services related to general medical practice, oral health, occupational therapy, physiotherapy, dietetics, social work, radiography, ophthalmology, mental health, speech and hearing, immunisation, public health programs, minor procedures (e.g. incision and drainage) and pharmacy/dispensary. | Core. |  |
|  |  | The system must make available the functionality as described under patient care provision function to record an encounter/episode of care where a clinical and/or social care service is rendered to outpatients at a clinic or mobile clinic facility or during a community visit (such as school, old age home or patient’s residence). This includes the referral function, also part of patient care provision function, to accommodate patients that are referred from the clinic for example to hospital admission. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Clinic. 🡪 Clinic Care and Admin. 🡪 **Patient Care Admin [Clinic].** | The system must provide the ability to manage clinic patient care admin in line with the common patient care admin function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Clinic. 🡪 Clinic Care and Admin. 🡪 **Invoicing [Clinic].** | The system must provide the ability to invoice a patient after a service has been rendered to the patient. Refer to the invoicing function requirement. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Clinic. 🡪 **Clinic Resource Admin.** | The system must provide the ability to manage clinic resource admin in order to ensure that the healthcare facility operates efficiently. Refer to common functions resource availability and resource allocation. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Clinic. 🡪 Clinic Resource Admin. 🡪 **Care Providers [Clinic].** | The system must provide the ability to manage and provide information about providers who work in a clinic. Refer to the care providers function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Clinic. 🡪 Clinic Resource Admin. 🡪 **External Facility Status [Clinic].** | The system should provide the ability provide and maintain information regarding status changes of external facilities on which the clinic relies for healthcare service delivery. Refer to the external facility status function. | Non-Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Clinic. 🡪 Clinic Resource Admin. 🡪 **Equipment and Devices [Clinic].** | The system should provide the ability to record and manage electronic devices used in the clinic. If performed centrally, this function must still be available for use within the clinic for enquiry and planning purposes. Refer to the equipment and devices function. | Non-Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Clinic. 🡪 Clinic Resource Admin. 🡪 **Resource Availability Status [Clinic].** | The system must provide the ability to continually maintain clinic resource information. Refer to the resource availability status function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Clinic. 🡪 Clinic Resource Admin. 🡪 **Resource Allocation [Clinic].** | The system must provide the ability to manage clinic resource allocation. Refer to the resource allocation function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Clinic. 🡪 Clinic Resource Admin. 🡪 **Performance [Clinic].** | The system must provide the ability to monitor and improve the provision of clinic care, to measure the performance of the clinic, its personnel, and facilities, and to monitor care-related costs. Refer to the performance function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Clinic. 🡪 Clinic Resource Admin. 🡪 **IC [Clinic].** | The system must provide the ability to manage, measure, improve and report on IC effectiveness in a clinic. Refer to the IC function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Clinic. 🡪 Clinic Resource Admin. 🡪 **WM [Clinic].** | The system should provide the ability to manage safe collection, disposal and recording of clinic medical waste. Refer to the WM function. | Non-Core. |  |
|  |  | The system should provide the ability to analyse recorded WM information in order to improve WM and to identify risks. | Non-Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 **Pharmacy/Dispensary.** | Pharmacy/dispensary function essentially consists of two high-level functions, namely pharmacy/dispensary care and admin and pharmacy/dispensary resource admin. As a composite function, pharmacy/dispensary consists of functions that are unique to a pharmacy/dispensary as well functions that are common (i.e. generic and therefore sharable by other functions). In the pharmacy/dispensary function list below, items in green font are common functions used by pharmacy/dispensary, whereas the rest are pharmacy/dispensary-unique functions. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Pharmacy/Dispensary. 🡪 **Pharmacy/Dispensary Care and Admin.** | Pharmacy/dispensary care and admin renders care (and related admin) in the form of patient-specific preparation by the pharmacist for, and including, the dispensing of medication. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Pharmacy/Dispensary. 🡪 Pharmacy/Dispensary Care and Admin. 🡪 **Pharmacy/Dispensary Order Processing.** | The system must provide the ability to render electronic medication and immunisation prescriptions, as well as miscellaneous orders (e.g. baby formula) to a pharmacy/dispensary. | Core. |  |
|  |  | The system must have an order processing function that allows for receipt of orders (prescriptions and miscellaneous orders) placed by providers via the medication orders and miscellaneous orders function, compiles order-based worklists for pharmacists/dispensers, and tracks these orders with the order-tracking function. | Core. |  |
|  |  | The system must have a workflow that send alerts to requestors regarding the execution status of their orders. | Core. |  |
|  |  | The system must have a priority ordering category for specific identified emergency services users. | Core. |  |
|  |  | The system must be able to reject medication ordering/dispensing based on out-of-range lab data, patient’s weight, body surface area and/or condition. | Core. |  |
|  |  | The system must have an ability to receive notice of patients not meeting specified criteria to ensure safe administration, thereby allowing the pharmacist/dispenser to make recommendations whilst the patient is still in their care. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Pharmacy/Dispensary. 🡪 Pharmacy/Dispensary Care and Admin. 🡪 **Patient Compliance Tracking [Pharmacy/Dispensary].** | The system must keep a record of patients where a repeat prescription was recommended and generate a real-time report of those who did not comply with the ordering scheduled at agreed time interval. This is a common function and is part of medication orders. | Core. |  |
|  |  | The system must make provision for the pharmacy/dispensary personnel to check that the patient complies with medication schedule, especially for repeat prescription. | Core |  |
|  |  | The system must have a loss control capability to flag patients with tendency to claim loss of medication and render alerts when a frequency pattern has been established | Non-Core |  |
|  | Care Resources. 🡪 Facilities. 🡪 Pharmacy/ Dispensary. 🡪 Pharmacy/Dispensary Care and Admin. 🡪 **Drug Utilisation Review [Pharmacy/Dispensary].** | Drug utilisation review, which is also known as pharmaceutical advice or prescription review, is a common function, and is part of medication orders. It can be fully used by both prescribers and pharmacists/dispensers. | Core. |  |
|  |  | The system must provide the functionality as described for the common function drug utilisation review to the pharmacy/dispensary function. (Refer to drug utilisation review requirement description). | Core. |  |
|  |  | The system must make provision for capturing of the specifics of the medication, e.g. brand, type, form, quantity, medication interaction and allergy checking, medication dosing and warnings, formulary compliance, medication alert overrides, medication alert overrides, medication reconciliation and all observations and actions of the pharmacist/dispenser during the review. | Core. |  |
|  |  | The system must send real-time notifications of which allergies and adverse reactions have been updated. | Non-Core. |  |
|  |  | The system must have an inter-communication channel where the prescriber and the pharmacists/dispenser can interact. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Pharmacy/ Dispensary. 🡪 Pharmacy/Dispensary Care and Admin. 🡪 **Dispensing.** | Dispensing starts once the pharmacist/dispenser determines which specific medication to dispense. It is the function of dispensing the physical medication as per a dispense document prepared by the drug utilisation review. Dispensing consists of two parts, namely prepare medication (which may include drug compounding) and supply medication. In addition to prescribed medicine, dispensing includes OTC medication and excludes medication administered from the stock of a hospital ward. The system must provide the ability to manage dispensing. | Core. |  |
|  |  | The system must have the ability to integrate with dispensing robotics. | Core. |  |
|  |  | The system must have a capability for reading and keeping record of expiry dates of stock. | Core. |  |
|  |  | The system must provide the ability to create a dispense record of tangible products that were dispensed with an indicator to distinguish between generic and branded versions. | Core. |  |
|  |  | The system must provide the ability to label medication before it is handed to the patient. | Core. |  |
|  |  | The system must provide the ability to link the dispensing event to the relevant order. | Core. |  |
|  |  | The system must update the patient’s clinical history, in particular the patient’s medication list. | Core. |  |
|  |  | The system must record the pharmacy/dispensary encounter. Refer to encounter/episode of care function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Pharmacy/ Dispensary. 🡪 Pharmacy/Dispensary Care and Admin. 🡪 **Pharmacy/Dispensary Results.** | Pharmacy/dispensary results informs the originator of the medication order (requestor) of the medication that was dispensed in response to the order. | Core. |  |
|  |  | The system must send notification to the requestor when medication that was ordered has been dispensed. | Core. |  |
|  |  | The system must update patient’s clinical information accordingly and present it to the requestor. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Pharmacy/ Dispensary. 🡪 Pharmacy/Dispensary Care and Admin. 🡪 **Invoicing [Pharmacy/Dispensary].** | The system should generate an invoice prior to each dispense activity. Refer to invoicing function description. | Non-Core. |  |
|  |  | The system must have formulas for defining the basis for the charge, percentage mark-ups, minimum charges, and handling fees. | Non-Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Pharmacy/Dispensary. 🡪 **Pharmacy/ Dispensary Resource Admin.** | Pharmacy/dispensary resource admin is operation-centred and administrates the resources of the pharmacy/ dispensary to enable it to operate as a healthcare facility. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Pharmacy. 🡪 Pharmacy / Dispensary Resource Admin. 🡪 **Resource Availability Status [Pharmacy/ Dispensary].** | The system must provide the ability to continually maintain pharmacy/dispensary resource information. Refer to the resource availability status function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Pharmacy/Dispensary. 🡪 Pharmacy/ Dispensary Resource Admin. 🡪 **Care Providers [Pharmacy/Dispensary].** | The system must provide the ability to manage and provide information about providers who work in a pharmacy/dispensary. Refer to the care providers function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Pharmacy/Dispensary. 🡪 Pharmacy/ Dispensary Resource Admin. 🡪 **Equipment and Devices [Pharmacy/Dispensary].** | The system should provide the ability to record and manage electronic devices used in the pharmacy/dispensary. If performed centrally, this function must still be available for use within the pharmacy/dispensary for enquiry and planning purposes. Refer to the equipment and devices function. | Non-Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Pharmacy/Dispensary. 🡪 Pharmacy/ Dispensary Resource Admin. 🡪 **Resource Allocation [Pharmacy/Dispensary].** | The system must provide the ability to manage pharmacy/dispensary resource allocation. Refer to the resource allocation function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Pharmacy/Dispensary. 🡪 Pharmacy/ Dispensary Resource Admin. 🡪 **Resource Scheduling [Pharmacy/ Dispensary].** | The system must provide the ability to schedule pharmacy/dispensary resources., e.g. to schedule staff for duty. Refer to the resource scheduling function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Pharmacy/Dispensary. 🡪 Pharmacy/ Dispensary Resource Admin. 🡪 **Performance [Pharmacy/Dispensary].** | The system must provide the ability to monitor and improve the performance of the pharmacy/dispensary and its personnel. Refer to the performance function. | Core. |  |
|  |  | The system must be able to send alerts and notifications when irregular activities (such as an overuse of one supplier or provider) have been detected, in order to prevent fraud. | Core |  |
|  |  | The system should interface with the HR system to keep track of administrative activities. | Non-core |  |
|  | Care Resources. 🡪 Facilities. 🡪 Pharmacy/Dispensary. 🡪 Pharmacy/ Dispensary Resource Admin. 🡪 **Pharmacy/Dispensary Stock Control.** | The system must provide the ability to manage pharmacy/dispensary stock control. | Core. |  |
|  |  | The system must have the ability to manage inventories on the location/ site and/or facility level. | Core. |  |
|  |  | The system must have barcoding / QR coding capability to update stock levels and manage inventories. | Core. |  |
|  |  | The system must have a stock control function that is linked to the dispense function in order to keep track of medication inventory. | Core. |  |
|  |  | The system should interface to the DOD’s existing supply chain system. | Non-Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Pharmacy/Dispensary. 🡪 Pharmacy/ Dispensary Resource Admin. 🡪 **IC [Pharmacy/Dispensary].** | The system must provide the ability to manage, measure, improve and report on IC effectiveness in a pharmacy/dispensary. Refer to the IC function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Pharmacy/Dispensary. 🡪 Pharmacy/Dispensary Resource Admin. 🡪 **WM [Pharmacy/Dispensary].** | The system should provide the ability to manage safe collection, disposal and recording of pharmaceutical/dispensary waste. Refer to the WM function. | Non-Core. |  |
|  |  | The system should provide the ability to analyse recorded pharmaceutical/dispensary WM information in order to improve WM and to identify risks. | Non-Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 **Radiology.** | Radiology, in this context, refers to a function (usually within a hospital) that renders a diagnostic imaging service rather than to the medical discipline of radiology per se. This function is mostly provided centrally by the radiology department of a hospital. However, imaging devices are ubiquitous across multiple clinical areas. Therefore, in addition to radiographers and radiologists, other providers who perform imaging procedures can also, by means of a Radiology Information System and Picture Archiving and Communications System (RIS-PACS) system, store, view, and report findings on, clinical images. Such information is integrated in the patient’s clinical and administrative record, irrespective of origin (Refer to externally sourced information). Radiology essentially consists of two high-level functions, namely radiology care and admin and radiology resource admin. As a composite function, radiology consists of functions that are unique to radiology as well functions that are common (i.e. generic and therefore sharable by other functions). In the radiology function list below, items in green font are common functions used by radiology, whereas the rest are radiology-unique functions. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Radiology. 🡪 **Radiology Care and Admin.** | This function is patient-centred and fills and administrates orders for diagnostic radiology procedures. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Radiology. 🡪 Radiology Care and Admin. 🡪 **Radiology Order Processing.** | The system must be able to use the orders function to receive orders for diagnostic imaging as placed by providers, compile order-based worklists for radiographers, and tracks orders with the order-tracking function. | Core. |  |
|  |  | The system must send alerts/notifications to provider regarding the execution status of their orders. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Radiology. 🡪 Radiology Care and Admin. 🡪 **Patient Belongings Admin [Radiology].** | Patient belongings admin function is a common function used to ensure that patient belongings are appropriately registered and safely stored whilst patient undergoes the procedure. Refer to the patient belongings admin function requirement description. | Non-Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Radiology. 🡪 Radiology Care and Admin. 🡪 **Radiology Procedure.** | The system must provide the ability to manage a radiology procedure. | Core. |  |
|  |  | The system must use the encounter/episode of care function to record the radiology examination and to deliver the radiology report. | Core. |  |
|  |  | The system must provide access to parts of the patient’s clinical history that might be relevant to radiologists and radiographers, e.g. the patient’s allergies, pregnancy, diagnosis etc. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Radiology. 🡪 Radiology Care and Admin. 🡪 **Radiology Results.** | The system must integrate the diagnostic images generated by radiology procedure into the patient’s clinical information and inform the originator of the order (requestor) of the results (report and diagnostic images) of the radiology procedure performed. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Radiology. 🡪 Radiology Care and Admin. 🡪 **Invoicing [Radiology].** | The system must generate an invoice when or shortly after, the radiology results are made available. Refer to invoicing function description. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Radiology. 🡪 **Radiology Resource Admin.** | This function is operation-centred and administrates the resources of radiology to enable it to operate as a healthcare facility. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Radiology. 🡪 Radiology Resource Admin. 🡪 **Resource Availability Status [Radiology].** | The system must provide the ability to continually maintain radiology resource information. Refer to the resource availability status function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Radiology. 🡪 Radiology Resource Admin. 🡪 **Care Providers [Radiology].** | The system must provide the ability to manage and provide information about providers who work in radiology. Refer to the care providers function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Radiology. 🡪 Radiology Resource Admin. 🡪 **Equipment and Devices [Radiology].** | The system must provide the ability to record and manage electronic devices used in radiology. If performed centrally, this function must still be available for use within the radiology department for enquiry and planning purposes. Refer to the equipment and devices function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Radiology. 🡪 Radiology Resource Admin. 🡪 **Resource Allocation [Radiology].** | The system must provide the ability to manage radiology resource allocation. Refer to the resource allocation function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Radiology. 🡪 Radiology Resource Admin. 🡪 **Resource Scheduling [Radiology].** | The system must provide the ability to schedule radiology resources, e.g. to schedule staff for duty. Refer to the resource scheduling function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Radiology. 🡪 Radiology Resource Admin. 🡪 **Performance [Radiology].** | The system must provide the ability to monitor and improve the performance of radiology personnel. Refer to the performance function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Radiology. 🡪 Radiology Resource Admin. 🡪 **Waiting Room Management [Radiology].** | The system must have a waiting room management function that utilises the common resource availability (waiting room management) function and the patient triage function in order to keep track of walk-in patients or patients who urgently require a diagnosis. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Radiology. 🡪 Radiology Resource Admin. 🡪 **Radiation Safety.** | Radiation safety minimises the exposure of staff and patients to radiation from imaging equipment, based on the ALARA (as low as reasonably achievable) principle. It entails optimising safe radiation practice by means of educating hospital staff on radiation best practices and enforcing protective measures such as wearing of dosimeters by staff. The system must provide the ability to manage radiation safety. | Core. |  |
|  |  | The system must interface with the radiology equipment (such as a dosimeter) to measure cumulative radiation exposure. | Core. |  |
|  |  | The system must be able to analyse readings and provide feedback about where and when providers are receiving radiation doses. | Core. |  |
|  |  | The system must keep history of providers’ dosimeter readings per provider over time. | Core. |  |
|  |  | The system must provide the ability to interface with Radiology Information Systems (RIS) to obtain radiation exposure information of providers and to store it on the provider’s record in the eHealth system. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Radiology. 🡪 Radiology Resource Admin. 🡪 **IC [Radiology].** | The system must provide the ability to manage, measure, improve and report on IC effectiveness in the radiology department. Refer to the IC function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Radiology. 🡪 Radiology Resource Admin. 🡪 **WM [Radiology].** | The system should provide the ability to manage safe collection, disposal and recording of radiology department waste. Refer to the WM function. | Non-Core. |  |
|  |  | The system should provide the ability to analyse recorded radiology WM information in order to improve WM and to identify risks. | Non-Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 **Laboratory.** | The laboratory function essentially consists of two high-level functions, namely laboratory care and admin and laboratory resource admin. It receives orders and specimens (from medical providers) for pathology laboratory tests, performs the tests, and provides the results to the requesters. These processes vary according to the pathology disciplines they apply to, as well as test types and modes of testing. Each pathology discipline is thus likely to require its own workflow. Depending on the discipline, tests are performed either manually, by semi-automated machines, or by fully automated machines. In the laboratory function list below, items in green font are common functions used by laboratory, whereas the rest are laboratory-unique functions. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Laboratory. 🡪 **Laboratory Care and Admin.** | The system must be able to fill and administer orders for laboratory tests. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Laboratory. 🡪 Laboratory Care and Admin. 🡪 **Laboratory Order Processing.** | The system must be able to use the orders function to receive orders for lab tests as placed by providers. | Core. |  |
|  |  | The system must compile order-based worklists for lab technicians, and track orders using the order-tracking function. | Core. |  |
|  |  | The system must send notifications or alerts to providers (requestors) regarding the execution status of these orders. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Laboratory. 🡪 Laboratory Care and Admin. 🡪 **Laboratory Tests.** | The system must provide the ability to manage laboratory tests information generated outside of the eHealth system. | Core. |  |
|  |  | The system must give pathologists access to potentially relevant parts of the patient’s clinical history. | Core. |  |
|  |  | The system must provide the ability to record the lab tests performed by lab technicians via relevant patient care provision functions the encounter/episode of care function. | Core. |  |
|  |  | The system must automatically record lab tests (from machine output) where reasonable possible with room for manual data capture where necessary. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Laboratory. 🡪 Laboratory Care and Admin. 🡪 **Laboratory Results.** | The system must integrate the lab results into the patient’s clinical information. | Core. |  |
|  |  | The system must route the lab report and test results to the originator of the order (requestor). | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Laboratory. 🡪 Laboratory Care and Admin. 🡪 **Invoicing [Laboratory].** | The system should issue an invoice when, or shortly after, the lab results are made available using the common function invoicing. | Non-Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Laboratory. 🡪 **Laboratory Resource Admin.** | This function is operation-centred and administrates the resources of the laboratory to enable it to operate as a healthcare facility. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Laboratory. 🡪 Laboratory Resource Admin. 🡪 **Resource Availability Status [Laboratory].** | The system must provide the ability to continually maintain laboratory resource information. Refer to the resource availability status function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Laboratory. 🡪 Laboratory Resource Admin. 🡪 **Care Providers [Laboratory].** | The system must provide the ability to manage and provide information about providers who work in a laboratory. Refer to the care providers function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Laboratory. 🡪 Laboratory Resource Admin. 🡪 **Equipment and Devices [Laboratory].** | The system should provide the ability to record and manage electronic devices used in the laboratory. If performed centrally, this function must still be available for use within the laboratory for enquiry and planning purposes. Refer to the equipment and devices function. | Non-Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Laboratory. 🡪 Laboratory Resource Admin. 🡪 **Resource Allocation [Laboratory].** | The system must provide the ability to manage laboratory resource allocation. Refer to the resource allocation function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Laboratory. 🡪 Laboratory Resource Admin. 🡪 **Resource Scheduling [Laboratory].** | The system must provide the ability to schedule laboratory resources, e.g. to schedule laboratory staff for duty. Refer to the resource scheduling function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Laboratory. 🡪 Laboratory Resource Admin. 🡪 **Performance [Laboratory].** | The system must provide the ability to monitor and improve the performance of the laboratory personnel. Refer to the performance function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Laboratory. 🡪 Laboratory Resource Admin. 🡪 **IC [Laboratory].** | The system must provide the ability to manage, measure, improve and report on IC effectiveness in a laboratory. Refer to the IC function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Laboratory. 🡪 Laboratory Resource Admin. 🡪 **WM [Laboratory].** | The system should provide the ability to manage safe collection, disposal and recording of laboratory medical waste. Refer to the WM function. | Non-Core. |  |
|  |  | The system should provide the ability to analyse recorded laboratory WM information in order to improve WM and to identify risks. | Non-Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 **Emergency Response (ER).** | The system must provide the ability to manage ER. ER is the first response to medical emergencies in non-hospital/facility-based scenarios. Generally, it consists of first responder care such as emergency ambulance care and care rendered by fire fighters trained in life support procedures. It further includes first response to mass casualty events, (actual or potential) such as road, train and plane crashes, natural disasters, humanitarian crises, and actual or threatened acts of terror. It also includes the care rendered following a disaster. Emergency care rendered within care facilities (including a hospital’s emergency department) is excluded from the ER function. Transport and low-care-only functions of an ambulance service e.g. for planned inter-facility transfers are included in the ER function, as the same resources are utilised. In the ER function list below, items in green font are common functions used by ER, whereas the rest are ER-unique functions.   1. An emergency response to a humanitarian disaster may transition to a maintenance phase in which preventive healthcare becomes a priority. Information on such care (e.g. vaccination campaigns) is accessible to concerned health authorities. 2. As a composite function, ER consists of functions that are unique to ER as well functions that are common (i.e. generic and therefore sharable by other functions). | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Emergency Response (ER). 🡪 **ER Care and Admin.** | This function is patient-centred and fills and administrates orders for ER services. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Emergency Response (ER). 🡪 ER Care and Admin. 🡪 **ER Contact Centre.** | The system must provide an ER contact centre functionality through which emergency calls may be received and logged. | Core. |  |
|  |  | The system must be able to track incoming calls and keep a recording of the call conversation in various formats including voice and text. | Core |  |
|  |  | The system must have a geolocation and mapping capability to help with identification of the exact location of the call and incident, as well as current position of available ambulance. | Core |  |
|  | Care Resources. 🡪 Facilities. 🡪 Emergency Response (ER). 🡪 ER Care and Admin. 🡪 **Dispatching.** | The system must be able to dispatch personnel, ambulance and equipment to patients using computer-aided dispatch (CAD). | Core. |  |
|  |  | The system must have an automatic vehicle location (AVL) function that is integrated with the CAD and mobile data terminals. | Core. |  |
|  |  | The system must provide the ability to record spatial information which includes time (pick-up and drop-off), distance travelled and level of ambulance care (e.g. ICU/General). | Core. |  |
|  |  | The system must be able to link with the resource availability status function to get a real-time view of available ambulances and drivers. | Core. |  |
|  |  | The system must have a geolocation and mapping capability to ensure that available ambulances are dispatched according to their closest proximity to the incident location. | Core. |  |
|  |  | The system be able to generate and send notifications, alerts and dispatch assignments to designated response units. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Emergency Response (ER). 🡪 ER Care and Admin. 🡪 **Live Tracking & Monitoring** | The system must have a comprehensive control room capability to ensure effective dispatching of vehicles and real-time tracking and monitoring. | Core. |  |
|  |  | The system must have status tracking capability to enable real-time tracking of dispatched ambulances, en-route status, estimated time of arrival and updates on patient care. | Core. |  |
|  |  | The system must have a two-way communication between dispatchers and emergency responders or emergency responders and receiving HCP to allow for seamless data exchange, updates and instructions. | Core. |  |
|  |  | The system must enable live tracking of ambulances, speed, traffic conditions and fuel levels. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Emergency Response (ER). 🡪 ER Care and Admin. 🡪 **ER Patient Identification.** | The system must be able to register a patient as an emergence response patient and if possible, to identify and confirm the patient’s demographics, preferences, patient relationships (e.g. to a proxy), advance directives, consent and authorisation with patient admin record function. | Core. |  |
|  |  | The system must provide the ability to record and confirm the patient’s medication list, allergies, previous medical procedures, illnesses, health factors, problems such as chronic conditions and medical devices (e.g. prosthetics). Refer to the clinical history function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Emergency Response (ER). 🡪 ER Care and Admin. 🡪 **ER Treatment.** | The system must use the encounter/episode of care function and any applicable patient care provision function (such as clinical history; clinical documentation and administering) to record patient treatment in an emergency response. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Emergency Response (ER). 🡪 ER Care and Admin. 🡪 **Invoicing [ER].** | The system should generate an invoice shortly after the ER service has been rendered using the common function invoicing. | Non-Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Emergency Response (ER). 🡪 **ER Resource Admin.** | This function is operation-centred and administrates the resources of the ER to enable it to operate as a healthcare facility. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Emergency Response (ER). 🡪 ER Resource Admin. 🡪 **Resource Availability Status [ER].** | The system must provide the ability to continually maintain its resource information as well as planning for large-scale disasters (during which ER might require additional resources from other facilities within the organisation). Refer to the resource availability status function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Emergency Response (ER). 🡪 ER Resource Admin. 🡪 **Care Providers [ER].** | The system must provide the ability to manage and provide information about providers who work in ER, such as paramedics and ambulance drivers. Refer to the care providers function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Emergency Response (ER). 🡪 ER Resource Admin. 🡪 **Equipment and Devices [ER].** | The system must provide the ability to record and manage electronic devices used in ER. If performed centrally, this function must still be available for use within ER for enquiry and planning purposes. Refer to the equipment and devices function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Emergency Response (ER). 🡪 ER Resource Admin. 🡪 **Resource Allocation [ER].** | The system must provide the ability to manage ER resource allocation. Refer to the resource allocation function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Emergency Response (ER). 🡪 ER Resource Admin. 🡪 **Resource Scheduling [ER].** | The system must provide the ability to schedule ER resources, e.g. to schedule staff for duty. Refer to the resource scheduling function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Emergency Response (ER). 🡪 ER Resource Admin. 🡪 **Performance [ER].** | The system must monitor performance and identify areas of improvement through analysis of information such as time to respond and time to arrive at an emergency scene, and the clinical information of ER patients. Refer to the performance function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Emergency Response (ER). 🡪 ER Resource Admin. 🡪 **IC [ER].** | The system must provide the ability to manage, measure, improve and report on IC effectiveness in ER-related services. Refer to the IC function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Emergency Response (ER). 🡪 ER Resource Admin. 🡪 **WM [ER].** | The system should provide the ability to manage safe collection, disposal and recording of ER medical waste. Refer to the WM function. | Non-Core. |  |
|  |  | The system should provide the ability to analyse recorded WM information in order to improve WM and to identify risks. | Non-Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 **Dental/ Orthopaedic Laboratory.** | The system must provide the ability to manage a dental and orthopaedic laboratory. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Dental/ Orthopaedic Laboratory. 🡪 **Dental/Orthopaedic Laboratory Care and Admin.** | The system must provide the ability to maintain workflow in the dental/orthopaedic laboratory in order to keep track of the status of work in progress, and to keep record of work done per patient and per technician. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Dental/ Orthopaedic Laboratory. 🡪 Dental/ Orthopaedic Laboratory Care and Admin. 🡪 **Dental/Orthopaedic Laboratory Order Processing.** | The system must provide the ability to process orders received for dental/orthopaedic laboratory services. (Refer to the Orders function). | Core. |  |
|  |  | The system must provide the ability to manage different types of dental/orthopaedic laboratory services. | Core. |  |
|  |  | The system must provide the ability to compile order-based worklists for laboratory technicians. Worklists must include work stages per product according to the relevant protocols and business rules. (Refer to workflow management function). | Core. |  |
|  |  | The system must provide the ability to track dental/ orthopaedic laboratory service orders. (Refer to Order-tracking function). Dental/orthopaedic laboratory service order tracking must include:   1. Work stages per product. | Core. |  |
|  |  | 1. Work stage statuses. | Core. |  |
|  |  | The system must provide the ability to capture laboratory remarks per dental/ orthopaedic laboratory order. | Core. |  |
|  |  | The system must provide the ability to capture dental/orthopaedic laboratory procedure codes per stage. | Core. |  |
|  |  | The system must provide the ability to capture laboratory instructions per dental/ orthopaedic laboratory order being processed. | Core. |  |
|  |  | The system must provide the ability to manage dental/orthopaedic laboratory job cards. | Core. |  |
|  |  | The system must provide the ability to acknowledge receipt of a mouthpiece for a specific stage. | Core. |  |
|  |  | The system must provide the ability to capture, maintain and render procedures for a stage assigned to a laboratory technician. | Core. |  |
|  |  | The system must provide the ability to render all dental/orthopaedic laboratory work in progress according to specified criteria. | Core. |  |
|  |  | The system must provide the ability to manage shipment information (before a stage is shipped). | Core. |  |
|  |  | The system must provide the ability to capture brands and sub-brands of teeth used in the dental laboratory per order. | Core. |  |
|  |  | The system must present to the technician a list of all brands and sub-brands of teeth available that can be used in the laboratory for selection. | Core. |  |
|  |  | The system must provide the ability to capture shades per brands and sub-brands of teeth used in the dental laboratory per order. | Core. |  |
|  |  | The system must present to the technician a list of all shades per brands and sub-brands of teeth available that can be used in the laboratory for selection. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Dental/ Orthopaedic Laboratory. 🡪 Dental/ Orthopaedic Laboratory Care and Admin. 🡪 **Dental/Orthopaedic Laboratory Order Results.** | The system must provide the ability to notify requestors of dental/orthopaedic laboratory service orders regarding the execution status of the order. (Refer to order-tracking messages function). | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Dental/ Orthopaedic Laboratory. 🡪 Dental/ Orthopaedic Laboratory Care and Admin. 🡪 **Referrals [Dental/Orthopaedic Laboratory].** | The system must provide the ability to capture procedure codes for requests (or stages of it) outsourced to private dental/orthopaedic lab (supplier). (Refer to the Referrals function). | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Dental/ Orthopaedic Laboratory. 🡪 **Dental/ Orthopaedic Laboratory Resource Admin.** | This function is operation-centred and administrates the resources of the Dental/ Orthopaedic Laboratory to enable it to operate as a healthcare facility. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Dental/ Orthopaedic Laboratory. 🡪 Dental/ Orthopaedic Laboratory Resource Admin. 🡪 **Resource Availability [Dental/ Orthopaedic Laboratory].** | The system must provide the ability to manage dental/orthopaedic laboratory resource availability. Refer to Resource availability function. | Core. |  |
|  |  | The system must provide the ability to manage the availability of dental/orthopaedic laboratory technicians and assistants. (Refer to Resource availability function). | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Dental/ Orthopaedic Laboratory. 🡪 Dental/ Orthopaedic Laboratory Resource Admin. 🡪 **Resource Allocation [Dental/ Orthopaedic Laboratory].** | The system must provide the ability to manage dental/orthopaedic laboratory resource allocation. (Refer to resource allocation function). | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Dental/ Orthopaedic Laboratory. 🡪 Dental/ Orthopaedic Laboratory Resource Admin. 🡪 **Resource Scheduling [Dental/ Orthopaedic Laboratory].** | The system must provide the ability to schedule dental/orthopaedic laboratory staff for duty. (Refer to resource scheduling function). | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Dental/ Orthopaedic Laboratory. 🡪 Dental/ Orthopaedic Laboratory Resource Admin. 🡪 **Care Providers [Dental/Orthopaedic Laboratory].** | The system must provide the ability to manage and provide information about technicians (providers) who work in the dental/orthopaedic laboratory. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Dental/ Orthopaedic Laboratory. 🡪 Dental/ Orthopaedic Laboratory Resource Admin. 🡪 **Performance [Dental/Orthopaedic Laboratory].** | The system must provide the ability to monitor dental/ orthopaedic laboratory staff performance. (Refer to resource performance function). | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Dental/ Orthopaedic Laboratory. 🡪 Dental/ Orthopaedic Laboratory Resource Admin. 🡪 **Equipment and Devices [Dental/ Orthopaedic Laboratory].** | The system must provide the ability to record and manage electronic devices used in the dental/orthopaedic laboratory. If performed centrally, this function must still be available for use within dental/orthopaedic laboratory for enquiry and planning purposes. Refer to the equipment and devices function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Dental/ Orthopaedic Laboratory. 🡪 Dental/ Orthopaedic Laboratory Resource Admin. 🡪 **IC [Dental/Orthopaedic Laboratory].** | The system must provide the ability to manage, measure, improve and report on IC effectiveness in ER-related services. Refer to the IC function. | Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Dental Laboratory. 🡪 Dental Laboratory Resource Admin. 🡪 **WM [Dental/ Orthopaedic Laboratory].** | The system should provide the ability to manage safe collection, disposal and recording of ER medical waste. Refer to the WM function. | Non-Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 **Disaster Management.** | The system must provide the ability to support disaster management. Disaster management involves the comprehensive planning, coordination, and response strategies to mitigate the impact of disasters on patient care, staff safety, and facility operations. | Non-Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Disaster Management. 🡪 **Disaster Admin.** | The system must provide the ability to register, update and display disaster incidents. | Non-Core. |  |
|  |  | The system should provide the ability to create standard templates for registration of new disaster incidents. | Non-Core. |  |
|  |  | The system should provide the ability to update disaster particulars such as the status of casualties | Non-Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Disaster Management. 🡪 **Emergency Preparedness Planning.** | The system should contain a repository of various types of emergency incidents (e.g. fire, storm, floods, etc.), potential events associated with the incident, the equipment to be used and the expected response. | Non-Core. |  |
|  |  | The system should have built-in incident management protocols for each respective incident type. | Non-Core. |  |
|  |  | The system should have a visual map of each facility with clear descriptions (e.g. L2SW Ward 6). | Non-Core. |  |
|  |  | The system should have capabilities to promote early detection through integration with detector equipment triggers (e.g. smoke detectors). | Non-Core. |  |
|  |  | The system should have a capability to create a temporal triage suitable for various emergency types. | Non-Core. |  |
|  |  | The system should integrate with other information source including year planner or calendar and schedule reminders at predetermined intervals to keep the plan up-to-date. | Non-Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Disaster Management. 🡪 **Hazard Identification and Risk Assessment.** | The system should have customisable templates for assessing and monitoring the magnitude and potential impact of the identified hazard. | Non-Core. |  |
|  |  | The system should have templates for different phases of the incident lifecycle such as incident detection, incident registration and incident closure. | Non-Core. |  |
|  |  | The system should have built-in customisable templates for hazard vulnerability assessment. | Non-Core. |  |
|  |  | The system should be able to calculate resource and equipment requirements based on the type of incident registered and generate a modifiable action plan. | Non-Core. |  |
|  |  | The system should be able to activate a temporal triage as and when required. | Non-Core. |  |
|  |  | The system should have notification triggers for communication to be sent to the responsible people to advise them of required action (e.g. in the event of a fire, deactivate elevator system). | Non-Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Disaster Management. 🡪 **Incident Response.** | The system should have templates for different phases of the incident lifecycle such as incident detection, incident registration and incident closure. | Non-Core. |  |
|  |  | The system should have built-in customisable templates for hazard vulnerability assessment. | Non-Core. |  |
|  |  | The system should be able to calculate resource and equipment requirements based on the type of incident registered and generate a modifiable action plan. | Non-Core. |  |
|  |  | The system should be able to activate a temporal triage as and when required. | Non-Core. |  |
|  |  | The system should have notification triggers for communication to be sent to the responsible people to advise them of required action (e.g. in the event of a fire, deactivate elevator system). | Non-Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Disaster Management. 🡪 **Patient Tracking and Triage.** | The system should have a capability to retrieve patient triage status to allow for quick discharge or relocation of those awaiting discharge in order to accommodate incoming patients. | Non-Core. |  |
|  |  | The system should have intelligence to detect severity of patient injuries and required response based on information captured to determine where to best accommodate the patient. | Non-Core. |  |
|  |  | The system should be able to enrol patients with temporal identities in cases where a patient is in no condition to provide their particulars (e.g. unconscious/critical). | Non-Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Disaster Management. 🡪 **Communication and co-ordination.** | The system should have a capability for real-time messaging including group messaging with file uploads and location data. | Non-Core. |  |
|  |  | The system should integrate with various data sources which include but are not limited to- disaster command centre, traffic, news and weather sources. | Non-Core. |  |
|  |  | The system should send alerts notifications to responsible people advising them of required action as listed against their role. | Non-Core. |  |
|  |  | The system should have video conferencing capabilities to allow for situations where medical personnel cannot physically access the patient location. | Non-Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Disaster Management. 🡪 **Patient Evacuation and Sheltering.** | The system should have a capability for interpreting data from location generating devices to allow for real-time monitoring of patient movements. | Non-Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Disaster Management. 🡪 **Resource Management.** | The system should contain a resource scheduling toolkit with pre-identified personnel and related assignments/tasks and equipment for each incident type. | Non-Core. |  |
|  |  | The system should have a stock count capability with visual warmings for instances where minimum inventory mark has been reached. | Non-Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Disaster Management. 🡪 **Continuity of Operations.** | The system should have standard post-disaster wellness checks associated with each type of disaster. | Non-Core. |  |
|  |  | The system should be able to generate work-around plans based on the determined disaster impact and available resources. | Non-Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Disaster Management. 🡪 **Data Management and Reporting.** | The system should have a live dashboard with interactive real-time data visuals and custom filters. | Non-Core. |  |
|  |  | The system should be able to generate and export situational awareness reports in various formats. | Non-Core. |  |
|  |  | The system should have intelligence to provide a comparative analysis of multiple incidents and multiple locations. | Non-Core. |  |
|  |  | The system should be able to move essential function documentation and other data through each state of the planning process, from assessment to plan implementation. | Non-Core. |  |
|  | Care Resources. 🡪 Facilities. 🡪 Disaster Management. 🡪 **Performance Management.** | The system should be able to track individual personnel performance against set performance objectives | Non-Core. |  |

# Non-functional requirements

Non-functional requirements are expressed in Table 13 below, per non-functional aspect as listed below.

1. Interfaces to external systems
2. PoC equipment and patient wearables
3. Protection of Personal Information Act (POPIA)
4. NDoH Health Normative Standards Framework (HNSF)
5. System availability
6. System accessibility
7. Data availability
8. System performance
9. Document storage sizes
10. User interface
11. System customisability
12. Deployment
13. Hosting
14. Network
15. End-user devices
16. eHealth system maturity
17. Bidder affiliation / certification
18. Bidder experience
    1. System take-on
    2. System implementation
    3. System maintenance and support
19. Bidder profile and service
20. Licensing model
21. Customisation and larger enhancements
22. System take-on
23. System implementation
24. Project management

Column a of Table 13 reflects non-functional aspects.

Column b of Table 13 contains the description and requirements relevant to the non-functional aspect stated in bold in column a.

Column c of Table 13 is used to indicate if a requirement is considered as a core or non-core requirement. A requirement is classified as core when it must be satisfied by the eHealth system. Non-core requirements are considered as ‘nice-to-have’ requirements.

Column d of Table 13 is allocated for Bidder comment.

The bidder must indicate in Column d of Table 13, for each requirement, as indicated in the table below. Bidders are encouraged to provide additional information as comment per requirement (column d of Table 13).

Table 12 – Response legend (Non-functional requirements)

| **Response indicator** | **Definition** |
| --- | --- |
| Y | The system can satisfy the non-functional requirement. (no development is required) |
| YC | The proposed system must be customised with minor development to meet the requirement |
| YD | The system cannot satisfy the non-functional requirement, but with development it will meet the requirement |
| N | The system cannot satisfy the non-functional requirement, not even with development. |

Table 13 – Non-functional requirements

| **No** | **Non-functional aspect** | **Description and Requirements** | **Core**  **Non-Core** | **Bidder response & comment:**  **Y = Yes exist**  **YC = Customise, Minor development**  **YD = Can be developed**  **N = Not available** |
| --- | --- | --- | --- | --- |
| **a** | **B** | **c** | **d** |
|  | **Interfaces to External Systems.** | The DOD legacy enterprise resource planning (ERP) system will not be replaced by the eHealth system. Thus, the eHealth system must synchronously interface with the DOD ERP to send and receive information regarding:   1. DOD Human resource. 2. DOD Finance. 3. DOD Logistics. 4. DOD Organisation structure, including roles.   DOD ERP is on the Defence Information System Network (DISN). | Core. |  |
|  |  | The eHealth system must synchronously interface with systems of external providers hosted on hosting environments external to the eHealth system, e.g. external provider systems such as public and private hospitals, clinics, laboratories and medical practices. | Core. |  |
|  |  | The system must be provided with bidirectional application programming interfaces (APIs) for interfacing with other systems. Identified interfaces are: | Core. |  |
|  |  | 1. The system must have the ability to bidirectionally interface with statistical analytical software as well as project management software. | Core. |  |
|  |  | 1. The system must interface with RIS-PACS. | Core. |  |
|  |  | 1. Apart from the specific interfaces mentioned above, the system must be able to bi-directionally interface with any other system. | Core. |  |
|  | **PoC Equipment and Patient Wearables.** | The system must interface / exchange data with PoC medical equipment and patient wearables. (Refer to remote care information and equipment care information functions).  The system must be able to interface/exchange data with, but not limited to, medical devices and wearables listed below:   1. Electrocardiograph / Electrocardiogram / Computer-assisted electrocardiography 2. Implantable cardiac device interrogations (observations) 3. Pulse oximeter 4. Blood pressure monitor 5. Thermometer 6. Weighing scale 7. Glucose meter 8. Internation Normalised Ratio (INR) monitor 9. Insulin pump 10. Body composition analyser 11. Peak expiratory flow monitor 12. Urine analyser 13. Sleep apnea breathing therapy equipment 14. Continuous glucose monitoring 15. Power status monitor of personal health devices 16. Cardiovascular fitness and activity monitor 17. Strength fitness equipment 18. Independent living activity hub 19. Medication monitor 20. Analytical instruments - Point-of-care test   The system must be able to interface with PoC devices that comply with ISO/IEEE 11073 Medical / health device communication standards, as well as devices that has proprietary interfaces or that are compliant to any other interface standard such as the Fast Healthcare Interoperability Resources (FHIR) interface standard. | Core. |  |
|  | **POPIA.** | The system must conform to the Protection of Personal Protection of Personal Information Act (POPIA). | Core. |  |
|  | **National Department of Health, Health Normative Standards Framework (HNSF) 2021.** | The bidder must take note of the HNSF 2021, and the eHealth system must be customisable to comply with the HNSF for digital health interoperability in South Africa when required. HNSF 2021 is available at <https://www.health.gov.za/wp-content/uploads/2022/10/HNSF_Gazette_21_October_2022.pdf>. | Core. |  |
|  | **System Availability.** | The system must be available twenty-four hours a day, seven days a week; without system interruptions. | Core. |  |
|  | **System Accessibility.** | The system must be accessible from anywhere including from outside RSA boarders and rural RSA areas, using any computing device (e.g. laptop, desktop, smart phone, tablet). (Only authorised and authenticated users and devices). | Core. |  |
|  | **Data Availability.** | Users must have access to all data as allowed through RBAC, thus all data must be centrally available. | Core. |  |
|  | **System Performance.** | The system must be scalable to be able to successfully handle concurrent use by:   1. approximately 200 000 active patients to make appointments, access, view and annotate their EHR information and to communicate with providers. 2. approximately 2000 internal providers. 3. approximately 2000 external providers. | Core. |  |
|  | **Document Storage Sizes.** | Provide the maximum file/document size that can be uploaded to the system. | Core. |  |
|  | **User Interface.** | The system must be compatible with the latest versions of commonly used browsers such as Google Chrome, Microsoft Edge, Safari, Firefox etc.  Provide the browsers that are compatible with your eHealth system, including browser versions. | Core. |  |
|  |  | The eHealth system must be designed to be best viewed and adjusted to fit according to the user device’s screen resolution, width and orientation without the need for horizontal scrolling. | Core. |  |
|  |  | The system must accommodate users with disabilities and include braille, video and audio formats. | Non-Core. |  |
|  | **System Customisability.** | The eHealth system must be customisable to add other modules and functionality.  It is foreseen that large customisation (development) will be required to accommodate DOD-specific requirements such as medical classification, combat readiness and disaster management and other functions that are not usually included in eHealth systems. | Core. |  |
|  | **Deployment.** | The system must be deployed at:   1. Military deployments/exercises inside and outside the borders of South Africa. 2. Naval vessels at sea. 3. Every location throughout South Africa where SAMHS has offices or healthcare facilities. | Core. |  |
|  | **Hosting.** | The system must be hosted on the GPCE/CFI.  GPCE/CFI technology is as follows:   1. Hosting environment: Huawei Cloud Stack 6.X 2. IaaS type: Virtual Machines (VMs) support up to operating system (OS) 3. Supported OS:    1. Windows Server (supported versions)    2. Ubuntu Server    3. SUSE Linux Enterprise Server (SLES) OS 4. Primary & secondary VM configuration: Configured by SITA GPCE/CFI 5. Backup solutions: Snapshot(Huawei eBackup) based backups and application aware (Commvault) backups   If your system cannot be hosted in the above environment, provide the computing platforms, hardware and foundation software specification of the platforms that are applicable to your system. | Core. |  |
|  |  | The following information is required regarding hosting of the proposed eHealth system on the GPCE/CFI:   1. Number of VMs required | Core. |  |
|  |  | 1. OS and version for each VM | Core. |  |
|  |  | 1. OS disk size | Core. |  |
|  |  | 1. Minimum VM Network Interface Card (NIC) requirements | Core. |  |
|  |  | 1. Backup policy | Core. |  |
|  |  | 1. Disaster recovery (DR) policy requirements | Core. |  |
|  |  | GPCE/CFI Infrastructure-as-a-Service (IaaS) provides infrastructure components up to virtual machines and operating system, as mentioned above.  All other technology platforms/services/software[[6]](#footnote-6) that are required to host and use the eHealth system need to be provided with the eHealth system.  Provide a list of all technology platforms/services, with brand names with key specifications, that are required to host and use the eHealth system. | Core. |  |
|  |  | Specify dependencies such as certifications with regard to infrastructure, applicable to the eHealth system. | Core. |  |
|  | **Network.** | It must be possible to access the proposed system via the internet. Wired and wireless access are required. | Core. |  |
|  |  | The system must be deployed on the SITA NGN core network | Core. |  |
|  |  | Provide the minimum bandwidth requirement of your eHealth system. | Core. |  |
|  | **End-user Devices.** | Provide the minimum specification for the different types of end-user devices.   1. Workstation | Core. |  |
|  |  | 1. Laptop | Core. |  |
|  |  | 1. Smart phone | Core. |  |
|  |  | 1. Tablet | Core. |  |
|  |  | 1. Bar code scanner | Core. |  |
|  |  | 1. Biometric reader | Core. |  |
|  |  | 1. Label printers | Core. |  |
|  | **eHealth System Maturity.** | Provide the number of customers where your eHealth system is implemented and in operation. | Core. |  |
|  |  | Describe any product/system accreditation, if applicable. | Core. |  |
|  | **Bidder Affiliation / Certification.** | Indicate if you are the original software manufacturer (OSM) of the eHealth system. | Core. |  |
|  |  | Indicate if you are accredited with the OSM on an enterprise level for the provision, customisation and roll out of the proposed eHealth system. If accredited, provide the OSM name. | Core. |  |
|  |  | If accredited with the OSM, provide the accreditation level, e.g. enterprise for the provisioning, customisation and roll out of the eHealth system. | Core. |  |
|  |  | Provide the period (start and end dates) that your eHealth system is/was in operation per customer. | Core. |  |
|  |  | Describe any other supplier accreditation, if applicable. | Core. |  |
|  | Bidder Experience. 🡪 **System Take-on.** | Describe your experience in providing system take-on services to take-on your eHealth system in the RSA and internationally.  Please state examples of the customers to whom you have supplied the system take-on services and relevant dates. | Core. |  |
|  | Bidder Experience. 🡪 **System Implementation.** | Describe your experience in implementing your eHealth system in the RSA and internationally.  Please state examples of the customers to whom you have supplied the implementation services, relevant dates and indicate whether it included data migration from an existing system to your eHealth system or not. | Core. |  |
|  | Bidder Experience. **🡪Maintenance and Support.** | Describe your experience in providing system maintenance and support services on your eHealth system in the RSA and internationally.  Please state examples of the customers to whom you have supplied the system maintenance and support services and relevant dates. | Core. |  |
|  | **Bidder Profile and Services.** | Do you have a local capability in South Africa to provide the system and required services? | Core. |  |
|  |  | Provide the physical address(es) of your service outlet(s). | Core. |  |
|  | **Licensing Model.** | Provide complete information on the licensing of the system per product that the system comprises of, such as:   1. Term/Subscription or Perpetual Licensing 2. Licensing per user or per CPU 3. the minimum and maximum period that licenses can be procured for, 4. what are the minimum number of licenses that can be procured. | Core. |  |
|  | **System Customisation and Larger Enhancements** | How long (in months) do you estimate will it take to customise your eHealth system to satisfy all requirements that are categorised as core requirements? | Core. |  |
|  | **System Take-on** | Describe your approach to system take-on. | Core. |  |
|  | **System Implementation** | Describe your approach to system implementation. | Core. |  |
|  | **Project Management** | What project management methodology do you use? | Core. |  |

# Estimated price

The Bidder’s estimated price should be divided into the following categories and should take account of the following, **however, is not limited to these categories**:

1. eHealth system and licensing
   1. eHealth system and licensing as per the requirements documented in this specification. Note that **all products** (tools, platforms etc) that are required to run / use the proposed eHealth system must be included in the price. Products must be priced for development, test, training, pre-production and production environments on primary as well as secondary hosting sites.
   2. Specify whether perpetual of term/subscription licensing per product that forms part of the eHealth system.
2. Services
   1. eHealth system take-on
      1. Advise on hardware, software and connectivity requirements
      2. eHealth system installation (all required products)
      3. System configuration
      4. System customisation
      5. System testing
      6. Operating processes and procedures
   2. eHealth system implementation
      1. Project management
      2. OCM
      3. Data management
      4. Business process management
      5. Technology management
      6. Learner management
      7. Solution management
      8. Quality management
   3. System maintenance and support
   4. Ad hoc system enhancements.

**NOTE:** The table below may be used as a basis to provide pricing information, the bidder is requested to amend the table according to their licensing and contracting model.

Table 14 – Estimated pricing

|  |  | **Estimated price in ZAR** | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **No** | **Item** | **Yr 1** | **Yr 2** | **Yr 3** | **Yr 4** | **Yr 5** | **Yr 6** | **Yr 7** | **Yr 8** | **Yr 9** | **Yr 10** |
|  | **eHealth system (all environments[[7]](#footnote-7))** |  |  |  |  |  |  |  |  |  |  |
|  | 1. Product a |  |  |  |  |  |  |  |  |  |  |
|  | * 1. Development |  |  |  |  |  |  |  |  |  |  |
|  | * 1. Test |  |  |  |  |  |  |  |  |  |  |
|  | * 1. Training |  |  |  |  |  |  |  |  |  |  |
|  | * 1. Pre-production |  |  |  |  |  |  |  |  |  |  |
|  | * 1. Production |  |  |  |  |  |  |  |  |  |  |
|  | 1. Product b |  |  |  |  |  |  |  |  |  |  |
|  | * 1. Development |  |  |  |  |  |  |  |  |  |  |
|  | * 1. Test |  |  |  |  |  |  |  |  |  |  |
|  | * 1. Training |  |  |  |  |  |  |  |  |  |  |
|  | * 1. Pre-production |  |  |  |  |  |  |  |  |  |  |
|  | * 1. Production |  |  |  |  |  |  |  |  |  |  |
|  | 1. Product ***n*** (include ***all***products to be installed for the system to be used, per environment as indicated above) |  |  |  |  |  |  |  |  |  |  |
|  | **eHealth system licenses (all environments[[8]](#footnote-8) )** |  |  |  |  |  |  |  |  |  |  |
|  | 1. Product a |  |  |  |  |  |  |  |  |  |  |
|  | * 1. Develop |  |  |  |  |  |  |  |  |  |  |
|  | * 1. Test |  |  |  |  |  |  |  |  |  |  |
|  | * 1. Training |  |  |  |  |  |  |  |  |  |  |
|  | * 1. Pre-production |  |  |  |  |  |  |  |  |  |  |
|  | * 1. Production |  |  |  |  |  |  |  |  |  |  |
|  | 1. Product b |  |  |  |  |  |  |  |  |  |  |
|  | * 1. Develop |  |  |  |  |  |  |  |  |  |  |
|  | * 1. Test |  |  |  |  |  |  |  |  |  |  |
|  | * 1. Training |  |  |  |  |  |  |  |  |  |  |
|  | * 1. Pre-production |  |  |  |  |  |  |  |  |  |  |
|  | * 1. Production |  |  |  |  |  |  |  |  |  |  |
|  | 1. Product ***n*** (include ***all***products to be installed for the system to be used, per environment as indicated above) |  |  |  |  |  |  |  |  |  |  |
|  | **Services** |  |  |  |  |  |  |  |  |  |  |
|  | 1. **eHealth system take-on** |  |  |  |  |  |  |  |  |  |  |
|  | * 1. Advise on hardware, software and connectivity requirements |  |  |  |  |  |  |  |  |  |  |
|  | * 1. eHealth system installation (all required products) |  |  |  |  |  |  |  |  |  |  |
|  | * 1. System configuration |  |  |  |  |  |  |  |  |  |  |
|  | * 1. System customisation to satisfy all core requirements |  |  |  |  |  |  |  |  |  |  |
|  | * 1. System testing |  |  |  |  |  |  |  |  |  |  |
|  | * 1. Operating processes and procedures |  |  |  |  |  |  |  |  |  |  |
|  | 1. **eHealth system implementation** |  |  |  |  |  |  |  |  |  |  |
|  | * 1. Project management |  |  |  |  |  |  |  |  |  |  |
|  | * 1. OCM |  |  |  |  |  |  |  |  |  |  |
|  | * 1. Data management |  |  |  |  |  |  |  |  |  |  |
|  | * 1. Business process management |  |  |  |  |  |  |  |  |  |  |
|  | * 1. Technology management |  |  |  |  |  |  |  |  |  |  |
|  | * 1. Learner management |  |  |  |  |  |  |  |  |  |  |
|  | * 1. Solution management |  |  |  |  |  |  |  |  |  |  |
|  | * 1. Quality management |  |  |  |  |  |  |  |  |  |  |
|  | 1. **System maintenance and support (professional services)** |  |  |  |  |  |  |  |  |  |  |
|  | 1. **License maintenance and support** |  |  |  |  |  |  |  |  |  |  |
|  | 1. **Ad hoc system enhancements** |  |  |  |  |  |  |  |  |  |  |

#### 

# Contact details - Include General Enquiries and Technical Enquiries

1. General (Lunathi.Mqalo@sita.co.za)
2. Enquiries ([climate.bainze@sita.co.za](mailto:climate.bainze@sita.co.za))

# Definitions

1. “**RFI**”- a request for information, which is a written official enquiry document encompassing all the terms and conditions of the information in a prescribed or stipulated form.
2. “**RFIresponse**” - a written response in a prescribed form in response to an RFI.
3. “**AcceptableRFI**” - any RFI, which, in all respects, complies with the specifications and conditions of the RFI as set out in this document.
4. “**Bidder**”- any enterprise, consortium or person, partnership, company, close corporation, firm or any other form of enterprise or person, legal or natural, which has been invited by SITA to submit a bid in response to this RFI.
5. “**Client**” – SITA
6. “**Consortium**” - several entities joining forces under an umbrella to gain a strategic collaborative advantage by combining their expertise, capital, efforts, skills and knowledge for the purpose of executing a tender.
7. “**Goods**” –any work, equipment, machinery, tools, materials or anything of whatever nature to be rendered to SITA or Government in terms of a bid.
8. “**InternalCollaboration**”- collaborative arrangements within a group of companies or within various strategic business units/subsidiaries/operating divisions in order to gain a strategic position whilst sharing resources, profits and losses as well as risks.
9. “**Management**” - in relation to an enterprise or business, means an activity inclusive of control, and performed on a daily basis, by any person who is a principal executive officer of the company, by whatever name that person may be designated, and whether or not that person is a director.
10. “**Organ of State**”- a constitutional institution defined in the Public Finance Management Act, Act 1 of 1999.
11. “**Person (s)**” - a natural and/or juristic person (s).

# Acronyms and abbreviations

The following acronyms and abbreviations are used in this information and must be similarly used in in the information submitted in response and shall have the meaning ascribed thereto below.

| Term | Acronyms |
| --- | --- |
| a.m. | ante meridiem (before midday) |
| ABG | Arterial Blood Gas |
| AED | Automated External Defibrillator |
| AI | Artificial Intelligence |
| ALARA | As Low As Reasonably Achievable |
| AMA | discharge Against Medical Advice |
| APGAR | Appearance, Pulse, Grimace, Activity and Respiration |
| API | Application Programming Interface |
| API | application programming interface |
| ATNA | audit trails and node authentication |
| AVL | automatic vehicle location |
| BDS | business decision support |
| BI | business intelligence |
| BPM | business process management |
| BSA | body surface area |
| BSI | Blood stream infections |
| CAD | Computer-aided dispatch |
| CAUTI | Catheter-associated urinary tract infections |
| CBC | Complete blood count |
| CBT | Computer based training |
| CCU | Critical care unit |
| CD | Compact disk |
| CDA | [HL7] Clinical document architecture |
| CDS | Clinical decision support |
| CFI | Cloud Foundation Infrastructure |
| CHA | Comprehensive health assessment |
| CLABSI | Central line-associated blood stream infections |
| COIDA | Occupational Injury and Disease Administration |
| CPG | Clinical Practice Guidelines |
| CSD | Central Supplier Database |
| CSSD | Central Sterile Supply Department |
| DBMS | Database management system |
| DICOM | Digital Imaging and Communication in Medicine |
| DISN | Defence Information System Network |
| DOC | Microsoft Word document |
| DOD | Department of Defence |
| DoH | Department of Health |
| DR | Disaster recovery |
| DVD | Digital Versatile Disc |
| ECG | Electrocardiogram |
| ECMA | European Computer Manufacturers Association |
| ED | Emergency Department |
| EDI | Electronic data interchange |
| EHR | Electronic health record |
| EMS | Emergency Medical Services |
| EPP | External provider portal |
| ER | Emergency Response |
| ERP | Enterprise resource system |
| ETL | extract, transform and load |
| F&B | formulary and benefits |
| FHIR | Fast Healthcare Interoperability Resources |
| FISH | Fluorescence in situ hybridization |
| GP | General Practitioner |
| GPCE | Government Private Cloud Ecosystem |
| GPS | global positioning system |
| HAI | Healthcare-Associated Infections |
| HCI | Hyperconverged Infrastructure |
| HCM | Human Capital Management |
| HCP | Healthcare Provider |
| HCU | High-Care Unit |
| HEDIS | Healthcare Effectiveness Data and Information Set |
| HH | high-high |
| HI | Health Informatics |
| HIE | Health information exchange |
| HIRA | Hazard identification and risk assessment |
| HL7 | Health Level 7 |
| HNSF | Health Normative Standards Framework |
| HR | Human Resources |
| IaaS | Infrastructure-as-a-Service |
| IC | Infection control |
| ICD | International Classification of Diseases |
| ICSR | [HL7] Individual Case Safety Report |
| ICT | Information and Communication Technology |
| ICT | Information and Communication Technology |
| ICU | Intensive Care Unit |
| IETF | Internet Engineering Task Force |
| IHE | Integrating the Healthcare Enterprise |
| IM | Instant Messaging |
| INR | International Normalised Ratio |
| IoT | Internet of Things |
| IP | Internet Protocol |
| ISO | International Organisation for Standardisation |
| ISO/EN | European Standard |
| IT | Information Technology |
| IV | Intravenous |
| L2SW | Level 2 South West (used as an example of location in a hospital) |
| Lab | Laboratory |
| LAN | Local Area Network |
| LL | low-low |
| LOS | length of stay |
| LWBS | left without being seen |
| LWOT | left without notifying the facility |
| MCWH | maternal, child and woman’s health |
| MHC | Military Health Centre |
| MME | Main medical equipment |
| MMR | Military Medical Rooms |
| NCID | National Institute of Communicable Diseases |
| NDC | National Drug Code |
| NDoH | National Department of Health |
| NGN | Next-generation Network |
| NIC | Network Interface Card |
| NKA | No Known Allergies |
| NKFA | No Known Food Allergies |
| NMC | Notifiable medical conditions |
| OCM | Organisational Change Management |
| OCR | Optical Character Recognition |
| OHF | oral health fitness |
| OHS | Occupational Health and Safety |
| OID | Object Identifier |
| OPHRA | Occupational Personal Health Risk Assessment |
| OREP | Occupational Risk Exposure Profile |
| OS | operation System |
| OSM | Original Software Manufacturer |
| OSM | Original Software Manufacturer |
| OTC | over the counter |
| OTT | over-the-top |
| p.m. | post meridiem (after midday) |
| PACS | Picture Archiving and Communication System |
| PC | Personal Computer |
| PCR | Polymerase chain reaction |
| PDF | Portable Document Format |
| PHR | Personal Health Record |
| PHR-S | Personal Health Record System |
| PKI | Public Key Infrastructure |
| PLABSI | Peripheral line-associated blood stream infections |
| PLH | percentage loss of hearing |
| PoC | Point of Care |
| POPIA | Protection of Personal Information Act |
| PRN | *Pro Re Nata* “as needed” |
| PSI | patient safety incidents |
| PTSD | Post Traumatic Stress Disorder |
| QR | Quick Response |
| RBAC | Role-Based Access Control |
| RFC | Request for Comments |
| RFI | Request for Information |
| RIS | Radiology Information System |
| RPM | remote patient care |
| RSA | Republic of South Africa |
| RxNORM | Catalogue for medication where the active ingredients, strength and form are taken in consideration. |
| SAE | Serious Adverse Event |
| SAMHS | South African Military Health Service |
| SANDF | South African National Defence Force |
| SBS | Service Breakdown Structure |
| SDK | System Development Kit |
| SIG | *Signeteur* “let it be labelled” |
| SITA | State Information Technology Agency |
| SLES | SUSE Linux Enterprise Server |
| SMR | Sexual Maturity Rating |
| SMS | Short Message Service |
| SOC | State Owned Company |
| SOP | Standard Operating Procedure |
| SPSS | Statistical Package for Social Sciences |
| SSI | surgical site infections |
| US ASCII | American Standard Code for Information Interchange |
| UTC | Universal Coordinated Time |
| VAP | ventilator-associated pneumonias |
| VIS | Vaccine Information Statement |
| VM | Virtual Machine |
| WAN | Wide Area Network |
| WIL | Work Integrated Learning |
| WM | Waste Management |
| XML | Extensible Markup Language |

1. In this document the words ‘system’ and ‘solution’ have the same meaning. ‘System’ is mostly used. [↑](#footnote-ref-1)
2. Note that requirements may be repeated for clarity and context purposes. [↑](#footnote-ref-2)
3. Although the terms immunisation, vaccination, and inoculation are often used interchangeably, they differ in meaning. Vaccination is the process of administering a vaccine to a person, whereas immunisation is the process whereby the person’s immune system builds up a resistance to make him/her immune to a disease. In other words, vaccination is the administration of a vaccine, and immunization the intended consequence of a vaccination. The term inoculate can be used instead of vaccinate, but it has a broader definition: one can, e.g. inoculate a culture with a sample of saliva. In this document, the term immunisation incorporates the concept of vaccination. [↑](#footnote-ref-3)
4. Invoice management includes all aspects from creation, submission/receipt, processing, payment and remittances etc. [↑](#footnote-ref-4)
5. Problem list may include, but is not limited to, chronic and acute conditions, diagnoses, symptoms, injury/poisoning, adverse effects of medical care (e.g. drugs, surgical), functional limitations, visit or stay-specific conditions, diagnoses, or symptoms [↑](#footnote-ref-5)
6. Technology platforms/services/software may include for example the, database management system (DBMS), data interchange services, graphic and imaging services, location and directory services, software engineering platform/integrated development environment, transaction processing, user interface/user experience platform, security services, system and network management services, IoT platform, API management software, interoperability platform, data and analytics platform, decision support platform, unified communication platform and workflow management platform, QR code reader. [↑](#footnote-ref-6)
7. eHealth system at Development, Test, Training, Pre-Production and Production environments, each at primary and secondary hosting site. [↑](#footnote-ref-7)
8. eHealth system licensing at Development, Test, Training, Pre-Production and Production environments, each at primary and secondary hosting site. [↑](#footnote-ref-8)