HL7 Developmental Screening Project Functional Profile, Release 1 - US Realm

Based on HL7 EHR System Functional Model and Standard, Release 2.0

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Notes to Balloters

Criteria that have high digit numbers (numbered in the range 80-99) are newly added for the purposes of the Meaningful Use Functional Profile and do not exist in base EHR-System functional Model release 2.

Functional Profile Components

The Function List includes the following components:

Function ID # (Normative)	This is the unique identifier of a function in the Function List (e.g. CP.1.1) and should be used to uniquely identify the function when referencing functions. The Function ID also serves to identify the section within which the function exists (CP = Care Provision Section) and the hierarchy or relationship between functions (CP.1.1 is a sibling to CP.1.2, parent of CP.1.1.1 and child of CP.1). In many cases the parent is fully expressed by the children.
Function Type (Reference)	Indication of the line item as being a header (H) or function (F) or conformance criteria.
Header/Function Name (Normative)	This is the name of the Function and whilst expected to be unique within the Function List; it is not recommended to be used to identify the function without being accompanied by the Function ID. Example: Manage Medication List
Function Statement (Normative)	This is a brief statement of the purpose of this function. Whist not restricted to the use of structured language that is used in the Conformance Criteria (see below); the Statement should clearly identify the purpose and scope of the function. Example: Create and maintain patient-specific medication lists.
Description (Reference)	This is a more detailed description of the function, including examples if needed. Example: Medication lists are managed over time, whether over the course of a visit or stay, or the lifetime of a patient. All pertinent dates, including medication start, modification, and end dates are stored. The entire medication history for any medication, including alternative supplements and herbal medications, is viewable. Medication lists are not limited to medication orders recorded by providers, but may include, for example, pharmacy dispense/supply records, patient-reported medications and additional information such as age specific dosage.
Conformance Criteria (Normative)	Each function in the Function List includes one or more Conformance Criteria. A Conformance Criteria, which exists as normative language in this standard, defines the requirements for conforming to the function. The language used to express a conformance criterion is highly structured with standardized components with set meanings. The structured language used to define conformance clauses in the Function List are defined in the Glossary (Chapter 4).
Reference (Reference)	Reference to the Functional Model or Functional Profile the current Functional Profile was developed against.
Change Indicator	The change indicator shows the change from previous versions. This will be valued as follows: C - Changed D - Deleted N - New NC - No Change DEP - Deprecated
Priority	The priority for the implementation of the item. This will be valued as follows: EN - Essential Now EF - Essential Future O - Optional

1. Overarching Section

Section Overview

The Overarching Section contains Conformance Criteria that apply to all EHR Systems and consequently must be included in all EHR-S FM compliant profiles. These criteria are grouped under a single Function. All functions within the Overarching Section have an identifier starting with “OV”.

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
OV.1 Function	Overarching Criteria	OV.1	NC	EN
	Statement: Overarching criteria are those that apply to all EHR Systems. **Description:** The Overarching Section contains Conformance Criteria that apply to all EHR Systems and consequently must be included in all EHR-S FM compliant profiles. These criteria are grouped under a single Function.			
1.	The system SHALL conform to function CP.9.1 (Produce a Summary Record of Care).	OV.1	NC	EN
2.	The system SHALL conform to function CPS.9.3 (Health Record Output).	OV.1	NC	EN
3.	The system SHALL conform to function CPS.9.4 (Standard Report Generation).	OV.1	NC	EN
4.	The system SHALL conform to function RI.1.1 (Record Lifecycle) and all child functions.	OV.1	NC	EN
5.	The system SHALL conform to function RI.1.2 (Record Lifespan) and all child functions.	OV.1	NC	EN
6.	The system SHALL conform to function RI.2 (Record Synchronization).	OV.1	NC	EN
7.	The system SHALL conform to function RI.3 (Record Archive and Restore).	OV.1	NC	EN
8.	The system SHALL conform to function TI.1.1 (Entity Authentication).	OV.1	NC	EN
9.	The system SHALL conform to function TI.1.2 (Entity Authorization) .	OV.1	NC	EN
10.	The system SHALL conform to function TI.1.3 (Entity Access Control).	OV.1	NC	EN
11.	The system SHALL conform to function TI.1.4 (Patient Access Management).	OV.1	NC	EN
12.	The system SHALL conform to function TI.1.5 (Non-Repudiation).	OV.1	NC	EN
13.	IF the system transmits data to or receives data from a system outside of a secure network, THEN the system SHALL conform to function TI.1.6 (Secure Data Exchange), to ensure that the data are protected.	OV.1	NC	EN
14.	IF the system transmits data to or receives data from a system outside of a secure network, THEN the system SHALL conform to function TI.1.7 (Secure Data Routing), to ensure that the exchange occurs only among authorized senders and receivers.	OV.1	NC	EN
15.	The system SHALL conform to function TI.1.8 (Patient Privacy and Confidentiality).	OV.1	NC	EN
16.	The system SHALL conform to function TI.2 (Audit) and all child functions.	OV.1	NC	EN
17.	The system SHOULD conform to function TI.3 (Registry and Directory Services).	OV.1	NC	EN
18.	The system SHALL conform to function TI.4 (Standard Terminology and Terminology Services).	OV.1	NC	EN
19.	IF the system manages data for which standard terminologies have been established, THEN the system SHALL conform to function TI.4.1 (Standard Terminologies and Terminology Models) to support semantic interoperability.	OV.1	NC	EN
20.	IF the system manages data for which standard terminologies have been established, THEN the system SHALL conform to function TI.4.2 (Maintenance and Versioning of Standard Terminologies) to preserve the semantics of coded data over time.	OV.1	NC	EN
21.	IF terminology mapping is implemented within the system, THEN the system SHALL conform to function TI.4.3 (Terminology Mapping).	OV.1	NC	EN
22.	IF the system receives or transmits data for which jurisdictionally established interchange standards exist, THEN the system SHALL conform to function TI.5.1 (Application and Structured-Document Interchange Standards) and all child functions to support interoperability.	OV.1	NC	EN
23.	IF the system receives and transmits data for which generally accepted interchange standards have been established, THEN the system SHALL conform to function TI.5.2 (Interchange Standards Versioning and Maintenance), to accommodate the inevitable evolution of interchange standards.	OV.1	NC	EN
24.	The system SHOULD conform to function TI.5.3 (Standards-based Application Integration).	OV.1	NC	EN
25.	IF the system receives and transmits data with other systems outside itself, THEN the system SHALL conform to function TI.5.4 (Interchange Agreements), to define how the sender and receiver will exchange data.	OV.1	NC	EN
26.	The system SHOULD conform to function TI.6 (Business Rules Management).	OV.1	NC	EN
27.	The system SHOULD conform to function TI.7 (Workflow Management).	OV.1	NC	EN
28.	The system SHALL conform to function TI.8 (Database Backup and Recovery).	OV.1	NC	EN
29.	The system SHALL conform to function CPS.10 (Manage User Help).	OV.1	NC	EN
30.	The system SHALL conform to function TI.9 (System Management Operations and Performance).	OV.1	NC	EN

2. Care Provision Section

Section Overview

The Care Provision Section contains those functions and supporting Conformance Criteria that are required to provide direct care to a specific patient and enable hands-on delivery of healthcare. The functions are general and are not limited to a specific care setting and may be applied as part of an Electronic Health Record supporting healthcare offices, clinics, hospitals and specialty care centers. The functions in this section are organized in general flow of an encounter; however, it is recognized that encounter flow varies considerably in different care settings and scopes of practice. All functions within the Care Provision Section have an identifier starting with “CP”.

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
CP.1 Header	Manage Clinical History	CP.1	C	EN
	Statement: Manage the patient's clinical history lists used to present summary or detailed information on patient health history. **Description:** Patient Clinical History lists are used to present succinct "snapshots" of critical health information including patient history; allergy, intolerance and adverse reactions; medications; problems; strengths; immunizations; medical equipment/devices; patient and family preferences; and in addition, it will also be important to determine the developmental history, appropriate milestones and other interventions, as applicable.			
CP.1.1 Function	Manage Patient History	CP.1.1	C	EN
	Statement: Manage medical, procedural/surgical, mental health, substance use, social, developmental and family history. This includes pertinent positive and negative histories, patient-reported or externally available patient clinical history. **Description:** The history of the current illness and patient historical data related to previous medical diagnoses, surgeries and other procedures performed on the patient, clinicians involved in procedures or in past consultations, and relevant health conditions of family members is captured through such methods as patient reporting (e.g., interview, medical alert band) or electronic or non-electronic historical data. This data may take the form of a pertinent positive such as "The patient/family member has had..." or a pertinent negative such as "The patient/family member has not had...". When first seen by a health care provider, patients typically bring with them clinical information from past encounters. This and similar information may supplement locally captured documentation and notes wherever appropriate. Information regarding the patient's living situations may be an important means for a provider to uniquely identify a patient or to identify illnesses that may occur within a given proximity. Information regarding past or present living situations or environmental factors related to the patient or the fetal death may include a description of the father's type of occupation and occupational demographic information (such as the name and location of the employment). For example, it may be important for the clinician to know that the patient works in an occupation where lead exposure is common. It may also be important for the clinician to know that the patient lives in a household where asbestos routinely appears on clothing. In addition, it will also be important to determine the developmental history, appropriate milestones and other interventions (as applicable) of the patient.			
1.	The system SHALL provide the ability to manage current patient history including pertinent positive and negative elements (e.g., diagnosis or ruled out diagnosis), and information on clinicians involved.	CP.1.1	NC	EN
2.	The system SHALL provide the ability to manage the identity of clinicians involved in patient history elements according to scope of practice, organizational policy, and/or jurisdictional law.	CP.1.1	NC	EN
3.	The system SHOULD conform to function CPS.2.1 (Support externally-sourced Clinical Documents) to capture, store and render previous external patient histories.	CP.1.1	NC	EN
4.	The system SHOULD conform to function CPS.2.2 (Support externally-sourced Clinical Data) to capture, store and render previous external patient histories.	CP.1.1	NC	EN
5.	The system SHALL provide the ability to capture family history.	CP.1.1	NC	EN
6.	The system SHALL provide the ability to capture social history.	CP.1.1	NC	EN
7.	The system SHALL provide the ability to capture as part of the patient history the patient's relationships (e.g., genealogic, living situation, other).	CP.1.1	NC	EN
8.	The system SHALL provide the ability to capture structured data in the patient history (e.g., administrative, social, mental health, geographic location, and/or financial statuses, poverty, orphan, disability, incarceration, incompetence, or remote geographic location).	CP.1.1	NC	EN
9.	The system SHALL maintain and render documentation made in a non-linear as well as linear temporal and non-temporal sequence.	CP.1.1	NC	EN
10.	The system SHOULD provide the ability to present multiple levels of data (log view versus readable view) versus not display at all.	CP.1.1	NC	EN
11.	The system SHOULD provide the ability to capture patient history adhering to a standards-based form or template according to scope of practice, organizational policy, and/or jurisdictional law.	CP.1.1	NC	EN
12.	The system SHOULD provide the ability to capture an indication of the patient's receipt of social subsidies.	CP.1.1	NC	EN
13.	The system SHOULD provide the ability to capture Investigational Product (e.g., medication, device, immunization) exposure information including Start Date/time, End Date/Time, Dose Amount, Dose Unit, Study Treatment Name, Route, Formulation as discrete elements.	CP.1.1	NC	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
14.	The system SHOULD provide the ability to manage information regarding past or present living situations or environmental factors related to the patient (e.g., war, famine, poverty, political situation, or proximity to dangerous chemicals) according to scope of practice, organizational policy, and/or jurisdictional law.	CP.1.1	NC	EN
15.	The system SHOULD provide the ability to capture text documentation of any specific developmental changes in the Developmental History section of the EHR.		N	EN
CP.1.2 Function	Manage Allergy, Intolerance and Adverse Reaction List	CP.1.2	NC	EN
	Statement: Manage patient-specific allergy, intolerance and adverse reaction lists. **Description:** Allergens to substances, (including immunizations), are identified and the list of allergies is captured and maintained over time. Information regarding allergies may be coded or free text; coded information is preferred (where possible). In this function the term "allergy" is used to refer to allergies, intolerances, adverse reactions and sensitivities. All pertinent dates, including patient-reported events, are stored and the description of the patient allergy and adverse reaction is modifiable over time. The entire allergy history, including reaction, for any allergen is viewable. The list(s) includes all reactions including those that are classifiable as a true allergy, intolerance, side effect or other adverse reaction to drug, food or environmental triggers. Notations indicating whether item is patient reported, and/or provider verified are maintained. The term 'true allergy' is defined by the US National Library of Medicine as: an allergy that is caused by a series of chemical steps in the body that produce the allergic reaction. The allergy information that should be captured may vary according to scope of practice, organizational policy, and/or jurisdictional law. For example, the documentation requirements regarding an allergic reaction to a substance that is reportable may require a higher level of data capture.			
CP.1.3 Function	Manage Medication List	CP.1.3	NC	EN
	Statement: Create and maintain patient-specific medication lists. **Description:** Medication lists are managed over time, whether over the course of a visit or stay, or the lifetime of a patient. The entire medication history for any medication including, over-the-counter products, alternative supplements and herbal medications, is viewable. Medication lists are not limited to provider orders/prescriptions but may also include, for example, pharmacy dispensed medications without prescription, over the counter medications and patient-reported medications, etc. All pertinent dates, including medication start, modification, and end dates are stored. Medication Lists may also include additional information such as age-specific dosage.			
CP.1.4 Function	Manage Problem List	CP.1.4	NC	EN
	Statement: Create and maintain patient-specific problem lists. **Description:** A problem list may include, but is not limited to chronic conditions, diagnoses, or symptoms, injury/poisoning (both intentional and unintentional), adverse effects of medical care (e.g., drugs, surgical), functional limitations, visit or stay-specific conditions, diagnoses, or symptoms. Problem lists are managed over time, whether over the course of a visit or stay or the life of a patient, allowing documentation of historical information and tracking the changing character of problem(s) and their priority. The source (e.g., the provider, the system id, or the patient) of the updates should be documented. All pertinent dates are stored, including date noted or diagnosed, dates of any changes in problem specification or prioritization, and date of resolution. This might include time stamps, where useful and appropriate. The entire problem history for any problem in the list is viewable.			
1.	The system SHALL provide the ability to manage, as discrete data, all active problems associated with a patient.	CP.1.4	NC	EN
2.	The system SHALL capture, maintain and render a history of all problems associated with a patient.	CP.1.4	NC	EN
3.	The system SHALL provide the ability to manage the status of each problem (e.g., active, inactive, resolved).	CP.1.4	NC	EN
4.	The system SHALL provide the ability to manage relevant dates including the onset date and date(s) of problem status change (e.g., inactivation or resolution date).	CP.1.4	NC	EN
5.	The system SHALL provide the ability to manage information about the chronicity duration (e.g., chronic, acute/self-limiting) of a problem.	CP.1.4	NC	EN
6.	The system SHOULD provide the ability to manage information regarding the information source (i.e. informant) of the problem.	CP.1.4	NC	EN
7.	The system SHALL conform to function RI.1.1.17 (Deprecate/Retract Record Entries) to enable the inactivation or deprecation of a problem.	CP.1.4	NC	EN
9.	The system SHOULD provide the ability to render the list in a user-defined sort order.	CP.1.4	NC	EN
10.	The system SHALL provide the ability to render only active problems.	CP.1.4	NC	EN
11.	The system SHOULD provide the ability to link one or more problem(s) in the Problem list to encounters.	CP.1.4	NC	EN
12.	The system SHOULD provide the ability to link one or more problem(s) in the Problem List to medications.	CP.1.4	C	EN
13.	The system SHOULD provide the ability to link one or more problem(s) in the Problem list to orders.	CP.1.4	C	EN
14.	The system SHOULD provide the ability to link one or more problem(s) in the Problem list to medical equipment.	CP.1.4	C	EN
15.	The system SHOULD provide the ability to link one or more problem(s) in the Problem list to prosthetic/orthotic devices.	CP.1.4	C	EN
16.	The system SHOULD provide the ability to link one or more problem(s) in the Problem list to notes.	CP.1.4	C	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
17.	The system SHALL provide the ability to link orders, medical equipment, prosthetic/orthotic devices, and medications to one or more codified problems.	CP.1.4	NC	EN
18.	The system SHALL provide the ability to capture free text problems and render them in a manner that distinguishes them from coded problem entries.	CP.1.4	NC	EN
19.	The system SHALL tag and render an indicator that interaction checking will not occur against free text problems.	CP.1.4	NC	EN
20.	The system SHALL provide the ability to capture any relevant problem/ diagnoses from the healthcare provider in a standard terminology form (e.g, ICD or Snomed CT).	CP.1.4	C	EN
21.	The system SHALL provide the ability to manage free text comments associated with the problem.	CP.1.4	NC	EN
22.	The system SHOULD provide the ability to manage the severity of a problem using a standards based classification scheme.	CP.1.4	C	EN
23.	The system SHOULD provide the ability to link actions taken and outcomes with a problem.	CP.1.4	NC	EN
24.	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 scope of practice, organizational policy, and/or jurisdictional law.	CP.1.4	C	EN
25.	The system SHOULD provide the ability to manage a known single allele carrier status of a genetic trait or disease according to scope of practice, organizational policy, and/or jurisdictional law, and subject to patient's preferences and consent.	CP.1.4	C	EN
26.	The system SHOULD provide the ability to manage the linking of problems on the problem list, i.e., creating hierarchies or nestings within the problem list.	CP.1.4	NC	EN
27.	The system SHALL provide the ability to capture any relevant problem/ diagnoses from other qualified sources indicating specific delays or categories of service eligibility in a standard terminology form (e.g, ICD or Snomed CT).		N	EN
CP.3 Header	Manage Clinical Documentation	CP.3	NC	EN

Statement: Clinical Documentation must be managed including the capture of the documentation during an encounter, maintenance and appropriate rendering.

Description: Clinical documentation includes all documentation that the clinician may capture during the course of an encounter with the patient or relevant to the patient. This includes assessments, clinical measurements, clinical documents and notes, patient-specific care and treatment plans. Management of clinical documentation also includes the acknowledgement and amendments of documentation provided by other providers.

CP.3.1 Function	Conduct Assessments	CP.3.1	NC	EN

Statement: Create and maintain assessment information.

Description: During an encounter with a patient, the provider will conduct an assessment that is germane to the age, gender, developmental or functional state, medical and behavioral condition of the patient, such as growth charts, developmental profiles, and disease specific assessments. Wherever possible, this assessment should follow industry standard protocols although, for example, an assessment for an infant will have different content than one for an elderly patient. When a specific assessment template does not exist, a new, locally-defined assessment can be created, using the format and data elements of similar assessments whenever possible. (NOTE: A new assessment may not necessarily be unique, since a facility may copy an assessment from another facility.)

1.	The system SHALL provide the ability to manage Developmental Screening information captured (e.g., age, gender, developmental state, and health condition) according to scope of practice, organizational policy, and/or jurisdictional law.	CP.3.1	C	EN
2.	The system SHOULD provide the ability to manage patient information captured using recognized-standard, and/or locally-defined assessments according to scope of practice, organizational policy, and/or jurisdictional law.	CP.3.1	NC	EN
3.	The system SHALL provide the ability to manage additional Developmental Screening information as the child's medical condition changes.	CP.3.1	C	EN
4.	The system SHOULD provide the ability to link assessment information to a problem list according to scope of practice, organizational policy, and/or jurisdictional law.	CP.3.1	NC	EN
5.	The system SHOULD provide the ability to transmit assessment information to an individual care plan according to scope of practice, organizational policy, and/or jurisdictional law.	CP.3.1	NC	EN
6.	The system SHOULD provide the ability to receive assessment information from external sources (e.g., laboratory results and radiographic results) according to scope of practice, organizational policy, and/or jurisdictional law.	CP.3.1	C	EN
7.	The system SHOULD provide the ability to analyze and render assessment data compared with standardized curves (e.g., growth charts).	CP.3.1	NC	EN
8.	The system SHOULD provide the ability to exchange data between an assessment and a medication list.	CP.3.1	NC	EN
9.	The system SHOULD provide the ability to render appropriate assessment information as trends on a graph or a flowsheet.	CP.3.1	NC	EN
10.	The system SHOULD provide the ability to analyze assessment information using clinical prediction rules (e.g., the Glasgow Coma Score or Well's score) and capture and render the results.	CP.3.1	NC	EN
11.	The system SHOULD conform to function CPS.3.1 (Support for Standard Assessments).	CP.3.1	NC	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
12.	The system SHOULD conform to function CPS.3.2 (Support for Patient Context-Driven Assessments).	CP.3.1	NC	EN
13.	The system SHOULD provide the ability to render prior versions of completed recognized-standard, and/or locally-defined assessment information.	CP.3.1	NC	EN
14.	The system SHOULD provide the ability to analyze the schedule of mandated assessments, render a proposed schedule, and capture the assessment appointments.	CP.3.1	NC	EN
15.	The system SHOULD determine and render a proposed list of assessments based on context-related information (e.g., chief complaint, length of stay, abnormal vital signs, or response to medication).	CP.3.1	C	EN
16.	The system SHOULD provide the ability to capture, render and store Developmental Screening information and the score as discrete data as appropriate.	CP.3.1	C	EN
17.	The system SHOULD provide the ability to analyze by comparing "elements of assessments captured by the clinician" to "those elements of assessments designated by the organization as best practice assessments, and/or evidence-based resources" and render the results of the analysis.	CP.3.1	NC	EN
18.	The system SHALL provide the ability to present documentation in the child's next visit template of most recent previous screening results including: Concern/No Concern and Referral decision		N	EN
CP.3.3 Function	Manage Clinical Documents and Notes	CP.3.3	NC	EN
	Statement: Create, addend, amend, correct, authenticate, maintain, present and close, as needed, transcribed or directly-entered clinical documentation and notes. **Description:** Clinical documents and notes may be unstructured and created in a narrative form, which may be based on a template, graphic, audio, etc. The documents may also be structured documents that result from the capture of coded data. Each of these forms of clinical documentation is important and appropriate for different users and situations. To facilitate the management and documentation on how providers are responding to incoming data on orders and results, there may also be some free text or formal record on the providers' responsibility, and/or standard choices for disposition, such as Reviewed and Filed, Recall Patient, or Future Follow Up. The system may also provide support for documenting the clinician's differential diagnosis process.			
1.	The system SHALL provide the ability to capture and render clinical documentation as 'structured', and/or 'unstructured' data.	CP.3.3	NC	EN
2.	The system SHOULD present documentation templates (structured or free text) to facilitate creating documentation.	CP.3.3	NC	EN
3.	The system SHOULD provide the ability to present existing documentation within the patient's EHR while creating new documentation.	CP.3.3	NC	EN
4.	The system SHOULD provide the ability to link documentation with specific patient encounter(s) or event(s) (e.g., office visit, phone communication, e-mail consult, laboratory result).	CP.3.3	NC	EN
5.	The system SHOULD provide the ability to render the list in a user-defined sort order.	CP.3.3	NC	EN
6.	The system SHALL provide the ability to link clinical documents and notes to the specific developmental concern.	CP.3.3	C	EN
7.	The system SHALL provide the ability to update documentation prior to finalizing it.	CP.3.3	NC	EN
8.	The system SHALL provide the ability to tag a document or note as final, according to scope of practice, organizational policy, and/or jurisdictional law.	CP.3.3	NC	EN
9.	The system SHALL provide the ability to render all author(s) and authenticator(s) of documentation.	CP.3.3	NC	EN
10.	The system SHOULD provide the ability to render designated documents based on metadata search and filter (e.g., note type, date range, facility, author, authenticator and patient).	CP.3.3	NC	EN
11.	The system MAY 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).	CP.3.3	NC	EN
12.	The system SHOULD 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.	CP.3.3	NC	EN
13.	The system SHOULD provide the ability to render clinical documentation using an integrated charting or documentation tool (e.g., notes, flow-sheets, radiology views, or laboratory views).	CP.3.3	NC	EN
14.	The system SHOULD provide the ability to capture clinical documentation using specialized charting tools for patient-specific requirements (e.g., age - neonates, pediatrics, geriatrics; condition - impaired renal function; medication).	CP.3.3	NC	EN
15.	The system SHOULD provide the ability to capture, maintain and render transition-of-care related information according to scope of practice, organizational policy, and/or jurisdictional law.	CP.3.3	NC	EN
16.	The system SHOULD provide the ability to tag the status of clinical documentation (e.g., preliminary, final, signed).	CP.3.3	NC	EN
17.	The system SHOULD provide the ability to tag and render lists of patients requiring follow up contact (e.g., laboratory callbacks, radiology callbacks, left without being seen).	CP.3.3	NC	EN
18.	The system SHALL provide the ability to capture child follow-up contact activities (e.g "no" to indicate no follow-up needed, "yes" to indicate that follow-up is needed) based on developmental concerns.	CP.3.3	C	EN
19.	The system SHOULD provide the ability to save partially completed clinical documentation (i.e., without signature) for later editing and completion.	CP.3.3	NC	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
20.	IF the system provides the ability to save partially completed clinical documentation, THEN the system SHALL render this documentation only to the authorized users (e.g., author or author's supervisors).	CP.3.3	NC	EN
21.	IF the system provides the ability to save partially completed clinical documentation, THEN the system SHOULD provide the ability to tag unsigned documentation.	CP.3.3	NC	EN
22.	IF the system provides the ability to save partially completed clinical documentation, THEN the system SHOULD render a notification at specified intervals to the author.	CP.3.3	NC	EN
23.	The system SHALL provide the ability to present the type of follow up needed for developmental concerns by allowing the Healthcare Provider to select the "Type of Follow-up Needed": In-office consultation (conversation, information), Developmental Screening, Order Specific Testing (specify), Referral for Further Evaluation, Referral to Early Intervention, Referral to community services, Other.		N	EN
24.	The system SHALL provide the ability to capture the source of the developmental concern as the Healthcare Provider (HCP), Caregiver, Both HCP and Caregiver, or Other source.		N	EN
25.	The system MAY provide the ability to capture that a follow-up call was made.		N	EN
26.	The system MAY provide the ability to capture the results of the screening by domain scores using: 1) no concern (if the screening yields no negative findings) and 2) concern (if the screening results in positive findings to one or more domains or potential concern was identified).		N	EN
27.	The system MAY provide the ability to capture the responses to each item of the screening instrument.		N	EN
28.	The system SHALL provide the ability to capture the results of the completed developmental screen using: 1) no concern (if the screening yields no negative findings) and 2) concern (if the screening results in positive findings to one or more domains).		N	EN
29.	The system SHALL provide the ability to present a developmental concern which was reported by someone selecting "Yes, developmental concern" or "No developmental concern at present".		N	EN
30.	The system SHOULD provide the ability to capture any specific potential risk and protective factors related to the child's development.		N	EN
31.	The system SHOULD provide the ability to capture any specific physical, behavioral, or environmental observations.		N	EN
CP.3.4 Function	Manage Patient-Specific Care and Treatment Plans	CP.3.4	C	EN
	Statement: Provide templates and forms for clinicians to use for care plans, guidelines and protocols during provision of care and care planning. **Description:** During the provision of care, the clinician reviews and uses Developmental and Behavioral templates and forms to ensure consistent quality patient care. Care plans, guidelines or protocols may contain goals or targets for the patient, specific guidance to the providers, suggested orders, and nursing interventions, among other items, including alerts. Information such as Order sets for care plans may arrive from an external institution and need to be approved locally before being inserted into the care plan. Tracking of implementation or approval dates, modifications and relevancy to specific domains or context is provided. Transfer of treatment and care plans may be implemented electronically using, for example, templates, or by printing plans to paper.			
1.	The system SHALL provide the ability to manage patient-specific plans of care and treatment.	CP.3.4	NC	EN
2.	The system SHALL conform to function CP.7.1 (Present Guidelines and Protocols for Planning Care) and provide the ability to render locally or non-locally developed templates, guidelines, and protocols for the creation of patient-specific plans of care and treatment.	CP.3.4	NC	EN
3.	The system SHOULD provide the ability to capture metadata regarding a patient's plan of care or treatment (e.g., authors, creation date, version history, references, local sources and non-local sources) according to scope of practice, organizational policy, and/or jurisdictional law.	CP.3.4	NC	EN
4.	The system SHOULD provide the ability to link order sets with care plans.	CP.3.4	NC	EN
5.	The system SHOULD provide the ability to link the care plan with condition(s) in problem lists.	CP.3.4	NC	EN
6.	The system SHOULD provide the ability to determine and render order sets from care plans.	CP.3.4	NC	EN
7.	The system SHOULD provide the ability to determine and render care plans from order sets.	CP.3.4	C	EN
8.	The system SHOULD provide the ability to transmit care plans and treatment plans to other care providers.	CP.3.4	NC	EN
9.	The system SHOULD conform to function AS.5.1 (Clinical Task Creation, Assignment and Routing) to link care plan items into the tasks assigned and routed.	CP.3.4	NC	EN
10.	The system SHOULD conform to function AS.5.3 (Clinical Task Linking) to link care plan items and tasks.	CP.3.4	NC	EN
11.	The system SHOULD conform to function AS.5.4 (Clinical Task Status Tracking) to link care plan items with tasks tracked.	CP.3.4	NC	EN
12.	The system SHOULD conform to function CPS.4.2.2 (Support for Patient-Specific Dosing and Warnings) to determine and render related warnings on drug dosing and interactions.	CP.3.4	NC	EN
13.	The system SHALL conform to function CPS.1.7.1 (Support for Patient and Family Preferences) to improve the effectiveness of care and treatment plans.	CP.3.4	C	EN
14.	The system SHOULD provide the ability to determine and render a care plan review schedule or conference schedule.	CP.3.4	C	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
15.	The system SHALL provide the ability to capture, maintain and render, as discrete data, the reason for variation from rule-based clinical messages (e.g., alerts and reminders).	CP.3.4	NC	EN
16.	The system SHOULD provide the ability to capture that a patient should not be on a generally recommended care plan and the reason why.	CP.3.4	NC	EN
17.	The system SHALL provide the ability to capture care processes across the continuum of care.	CP.3.4	NC	EN
18.	The system SHOULD provide the ability to render care processes from across the continuum of care.	CP.3.4	NC	EN
19.	The system SHALL provide the ability to render internal care plans, guidelines, and protocols according to scope of practice.	CP.3.4	NC	EN
20.	The system SHOULD provide the ability to render external care plans, guidelines, and protocols according to scope of practice, and/or organizational policy.	CP.3.4	NC	EN
21.	The system SHALL provide the ability to capture, maintain and render, as discrete data, the reason for non-completion of the child's screening if the response to completion was "No" using XYZ value set/ code system. The value set must include the following non-complete reason options 1) caregiver refused, 2) too few items were completed, 3) language or literacy issue (screening tool and interpreter service not available in caregiver's language and interpreter service were not used) and 4) screener not provided at time of visit.		N	EN
22.	The system SHALL provide the ability to manage child-specific plans of care, treatment recommendations, results and other information related to the follow-up care of the child (e.g. need for additional developmental support or a health concern).		N	EN
CP.4 Function	Manage Orders	CP.4	C	EN

Statement: Provide the ability to manage clinical orders and results including medication, non-medication, diagnostic tests, blood products, other biologics and referrals, using order sets as appropriate.

Description: The provision of clinical care includes the need to order from a variety of treatments using order sets as appropriate as well as reviewing the results of treatment. Orders for treatments may include medications, non-medication therapies (e.g., physical therapy, special diet, immunizations, non-allopathic regimens); diagnostic care (e.g., laboratory , radiology); blood products and other biologics (e.g., blood transfusions, human growth hormones). Patients are often referred to other health care providers for more specialized diagnostic workup, and/or treatment. An effective EHR-S must include support and management of these processes and associated documentation. This includes ordering for developmental and behavioral screening evaluations as well as reviewing the results of the evaluations.

1.	The system SHALL provide the ability to manage role-based, context-based, and/or user-based order entry.	CP.4	NC	EN
2.	The system SHALL provide the ability to manage the creation, renewal, modification and discontinuation of orders.	CP.4	NC	EN
3.	The system SHALL provide the ability to render relevant, patient-specific laboratory test results when entering an order.	CP.4	NC	EN
4.	The system SHALL provide the ability to manage the status of an order (e.g., open, completed, in process).	CP.4	NC	EN
6.	The system SHOULD provide the ability to manage standing orders or orders that may be submitted by providers other than licensed providers according to scope of practice, organizational policy, and/or jurisdictional law.	CP.4	NC	EN
7.	The system SHALL provide the ability to capture and render problem/diagnosis as an element of an order.	CP.4	NC	EN
8.	The system SHOULD provide the ability to capture, maintain and render, as discrete data, a diagnosis/problem code, and/or description associated with an order of any type (including prescriptions and medications ordered for administration).	CP.4	C	EN
9.	The system SHOULD 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.	CP.4	C	EN
10.	The system SHALL provide the ability to annotate and render comments and instructions with an order.	CP.4	NC	EN
11.	The system SHOULD provide the ability to annotate and render free text comments and instructions with an order (e.g., "Short draw, do CBC first").	CP.4	NC	EN
12.	The system SHOULD provide the ability to tag frequently used and institutionally-approved order sets as "favorites" or "preferences" to facilitate retrieval and ordering.	CP.4	NC	EN
13.	The system SHOULD provide the ability to manage orders submitted to or received from external organizations, and/or facilities such as Health Information Exchanges (HIEs) or regional Electronic Health Record Systems (EHR-Ss).	CP.4	C	EN
14.	The system SHALL render patient identifying information (e.g., the patient name, identification number, and age or date of birth) on all order screens, according to scope of practice, organizational policy, and/or jurisdictional law.	CP.4	NC	EN
15.	The system SHALL 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.	CP.4	NC	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
16.	The system SHALL provide the ability to capture and render the urgency status (e.g., As-Soon-As-Possible or STAT) associated with an order.	CP.4	NC	EN
17.	The system SHOULD provide the ability to render order history for any order, including the ordering clinician, order details, date, and time.	CP.4	NC	EN
18.	The system SHOULD provide the ability to tag and render a field as required for a complete order by order type (e.g., pediatric order for antibiotic that requires the patient's weight).	CP.4	NC	EN
19.	The system SHOULD provide the ability to tag orders to be activated at a future date and time including admission orders, discharge orders, and post-operative orders.	CP.4	NC	EN
20.	The system SHOULD provide the ability to manage conditional orders that can be activated when certain criteria and conditions are met.	CP.4	C	EN
21.	The system SHALL provide the ability to capture, store and render the identity of all providers who signed an order including their name and credential identifier.	CP.4	NC	EN
22.	The system SHOULD provide the ability to render a list of active orders for a patient.	CP.4	NC	EN
23.	The system SHOULD provide the ability to render a list of orders by similar or comparable type (e.g., all radiology or all laboratory orders).	CP.4	NC	EN
24.	The system SHOULD 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).	CP.4	NC	EN
25.	The system SHOULD provide the ability to capture and transmit the provider's order cancellation request.	CP.4	NC	EN
26.	The system SHOULD conform to function CPS.8.4 (Support for Communication between Provider and Patient, and/or the Patient Representative) to manage information regarding orders.	CP.4	NC	EN
27.	The system SHALL provide the ability to determine and capture co-signatures for orders based upon roles (e.g., consulting physician) according to scope of practice, organizational policy, and/or jurisdictional law.	CP.4	NC	EN
28.	The system SHALL provide the ability to manage the status of the referral (e.g. 1) Follow-up complete, 2) Follow-up in process, 3) No follow-up).		N	EN
CP.4.1 Function	Use Order Sets	CP.4.1	NC	EN
	Statement: Use Order Set templates to facilitate order entry by rendering the appropriate orders based on provider request, input or system configuration. **Description:** Predefined order set templates may include medication and non-medication orders (e.g., diet, activities, nursing care, prescriptions and requests for investigations). They allow a care provider to choose common orders for a particular circumstance or disease state according to standards or other criteria such as provider preference. Recommended order set templates may be presented based on patient data or other contexts. Order Set templates may also allow the provider to modify (add/remove/change) orders during order entry for a particular patient.			
1.	The system SHALL provide the ability to capture a set of actions, and/or items to be ordered for a patient using a predefined order set template.	CP.4.1	NC	EN
2.	The system SHALL provide the ability to maintain a patient's orders as an order set.	CP.4.1	NC	EN
3.	The system SHOULD provide the ability to render a patient's orders as an order set.	CP.4.1	NC	EN
4.	The system MAY provide the ability to integrate patient information and order set templates to determine appropriate orders based on patient characteristics (e.g., developmental delay of speech would present a template for further screening of the child's speech).	CP.4.1	C	EN
5.	The system SHALL conform to function CPS.4.1 (Manage Order Set Templates).	CP.4.1	NC	EN
6.	The system MAY provide the ability to determine and render the appropriate order set template based on the results of the developmental screening	CP.4.1	C	EN
7.	The system SHALL 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).	CP.4.1	NC	EN
8.	The system SHOULD provide the ability to delete individual orders from an instance of an order set for an individual patient according to scope of practice, organizational policy, and/or jurisdictional law.	CP.4.1	NC	EN
9.	The system SHOULD provide the ability to tag as deleted an individual order(s) from an instance of an order set for an individual patient according to scope of practice, organizational policy, and/or jurisdictional law.	CP.4.1	NC	EN
10.	The system MAY provide the ability to integrate multiple order set templates, customizing and storing it as a new order set template according to scope of practice, organizational policy, and/or jurisdictional law.	CP.4.1	NC	EN
11.	The system SHOULD provide the ability to link order set(s) with condition(s) on the patient's problem list.	CP.4.1	NC	EN

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CP.4.2 Function	Manage Medication Orders	CP.4.2	NC	EN

Statement: Create prescriptions or other medication orders with detail adequate for correct filling and administration. Provide information regarding compliance of medication orders with formularies. Provide drug utilization review functionality including alerts regarding drug interactions and allergies.

Description: Medications include prescribed and over the counter (OTC) drugs, allergy shots, oxygen, anesthetics, chemotherapy, and dietary supplements that were ordered, supplied, administered, or continued. Different medication orders, including new, discontinue, refill/continue, and renew require different levels and kinds of detail, as do medication orders placed in different situations. Administration or patient instructions are available for selection by the ordering clinician, or the ordering clinician is facilitated in creating such instructions. The system may allow for the creation of common content for prescription details. Appropriate time stamps for all medication related activity are generated. This includes series of orders that are part of a therapeutic regimen, e.g., Renal Dialysis, Oncology. When it comes to capturing the medication rationale, it is not mandatory that the provider always provide this information.

In addition, the system should present the clinician with clinical decision support functionality (such as the presentation of allergies, drug-drug interactions) during the medication ordering process. When a clinician places an order for a medication, that order may or may not comply with a formulary specific to the patient's location or insurance coverage, if applicable. Whether the order complies with the formulary should be communicated to the ordering clinician at an appropriate point to allow the ordering clinician to decide whether to continue with the order. Formulary-compliant alternatives to the medication being ordered may also be presented.

1.	The system SHALL conform to function CP.4.2.1 (Medication Interaction and Allergy Checking).	CP.4.2	NC	EN
2.	The system SHALL conform to function CP.4.2.2 (Patient-Specific Medication Dosing & Warnings).	CP.4.2	NC	EN
3.	The system SHALL conform to function CP.4.2.3 (Medication Order Efficiencies).	CP.4.2	NC	EN
4.	The system SHALL conform to function CP.4.2.4 (Medication Alert Overrides).	CP.4.2	NC	EN
5.	The system SHALL provide the ability to capture medication order details as discrete data for correct filling, dispensing and administration of drug (e.g., dose, route, physical form, duration, SIG).	CP.4.2	NC	EN
6.	The system SHALL provide the ability to maintain and render, as discrete data, medication orders including all the details adequate for correct filling, dispensing and administration (e.g., drug, dose, route, SIG).	CP.4.2	NC	EN
7.	The system SHOULD provide the ability to capture medication order details including dose, route, frequency and comments as free text.	CP.4.2	NC	EN
8.	The system SHOULD 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").	CP.4.2	NC	EN
9.	The system SHOULD render fixed text (e.g., "Bio-hazard Warning") as part of a medication order according to organizational policy, and/or jurisdictional law.	CP.4.2	NC	EN
10.	The system SHALL determine and render a notification to the provider that information required to compute a dose is missing or invalid.	CP.4.2	NC	EN
11.	The system SHOULD 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.	CP.4.2	NC	EN
12.	The system SHOULD provide the ability to manage prescriptions using fractional units of medications (e.g., 1/2 tsp., 1/2 tablet).	CP.4.2	NC	EN
13.	The system SHALL provide the ability to capture and maintain documentation regarding patient weight, including such terms as "unknown", before entering medication orders.	CP.4.2	NC	EN
14.	The system SHOULD provide the ability to capture the administrative or clinical reasons/ indications/rationale for the medication(s) selected during order entry.	CP.4.2	NC	EN
15.	The system SHALL 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).	CP.4.2	NC	EN
16.	The system MAY provide the ability to determine and render the status of medication dispensing.	CP.4.2	NC	EN
17.	The system SHALL conform to function CP.1.3 (Manage Medication List) and update the appropriate medication list with the prescribed medications (in case of multiple medication lists).	CP.4.2	NC	EN
18.	The system SHALL provide the ability to enter and maintain medication information supplied by the patient.	CP.4.2	NC	EN
19.	The system MAY provide the ability to capture medication information electronically that was brought in by the patient (e.g., scanned bar code from a prescription label).	CP.4.2	NC	EN
20.	The system SHOULD conform to function CPS.4.2.4 (Support for Medication Recommendations).	CP.4.2	NC	EN
21.	The system SHOULD 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.	CP.4.2	NC	EN
22.	The system MAY provide the ability to receive and maintain prescription information from an external source (e.g., electronically from a non-network provider) to fill or renew a prescription.	CP.4.2	NC	EN
23.	The system SHOULD provide the ability to manage medication orders for uncoded medications.	CP.4.2	NC	EN

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24.	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).	CP.4.2	NC	EN
25.	The system MAY provide the ability to receive the patient's current medication list from pharmacy (directly) or via an intermediary network.	CP.4.2	NC	EN
26.	The system SHALL provide the ability to capture, maintain, and render an order for supplies that are associated with medication orders according to scope of practice, organizational policy, and/or jurisdictional law.	CP.4.2	NC	EN
27.	The system SHOULD render a list of frequently-used patient medication administration instructions.	CP.4.2	NC	EN
28.	IF the system renders a list of frequently-used patient medication administration instructions, THEN the system SHOULD capture the ordering clinician's selection.	CP.4.2	NC	EN
29.	The system MAY render a list of medication administration instructions common to multiple orders for the patient.	CP.4.2	NC	EN
30.	IF the system renders a list of medication administration instructions common to multiple orders for the patient, THEN the system SHOULD capture the ordering clinician's selection.	CP.4.2	NC	EN
31.	The system SHOULD provide the ability to render patient instructions that are linked to an ordered medication.	CP.4.2	NC	EN
32.	The system SHOULD conform to function AS.9.2 (Support Financial Eligibility Verification) to capture and render the results of electronic prescription eligibility and health plan/payer formulary verification of prescription coverage.	CP.4.2	NC	EN
33.	The system SHOULD conform to function AS.9.2 (Support Financial Eligibility Verification) to capture and render patient-specific health plan/payer formulary and benefit coverage.	CP.4.2	NC	EN
34.	The system SHOULD provide the ability to transmit a request for a patient's prescription drug insurance eligibility verification.	CP.4.2	NC	EN
35.	The system SHALL provide the ability to manage orders that contain discrete medication components to create combination drugs or compounds (e.g., Butalbital compound).	CP.4.2	NC	EN
36.	The system MAY provide the ability to maintain a constraint on the number of times that a prescription is transmitted for printing/reprinting and faxing/re-faxing, according to scope of practice, organizational policy, and/or jurisdictional law (e.g., limited print of narcotic prescription to 1 time).	CP.4.2	NC	EN
37.	The system SHALL track the number of times that a prescription was transmitted (to maintain a constraint on the number of times that a prescription is permitted to be transmitted for printing/reprinting and faxing/re-faxing).	CP.4.2	NC	EN
38.	The system MAY provide the ability to render prescriptions for printing/reprinting, according to scope of practice, organizational policy, and/or jurisdictional law.	CP.4.2	NC	EN
39.	The system MAY provide the ability to render prescriptions for faxing/re-faxing, according to scope of practice, organizational policy, and/or jurisdictional law.	CP.4.2	NC	EN
40.	The system MAY provide the ability to render the associated problem, diagnosis or condition (indication) on the printed prescription according to scope of practice, organizational policy, and/or jurisdictional law.	CP.4.2	NC	EN
41.	The system SHOULD provide the ability to render a list of transmission options for a prescription/medication order to a specified pharmacy (e.g., printing, faxing, e-prescribing).	CP.4.2	NC	EN
42.	The system SHOULD provide the ability to capture, maintain, and present the patient's consent to have restricted medications administered (e.g., Risk Evaluation and Mitigation Strategy (REMS) for research protocol and experimental drugs).	CP.4.2	NC	EN
43.	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 authorization requirements, step therapy requirements, age limits, gender limits, quantity limits, age, gender, summary resource links and drug-specific resource links).	CP.4.2	NC	EN
44.	The system SHOULD provide the ability to capture and render an indicator of an explicit route for the administration of specific medications during the ordering process.	CP.4.2	NC	EN
45.	The system SHOULD render available alternate medication administration routes during the medication ordering process when multiple routes exist and none was specified.	CP.4.2	NC	EN
CP.4.2.1 Function	Medication Interaction and Allergy Checking	CP.4.2.1	NC	EN
	Statement: Provide alerts for potential medication interactions and medication allergy reactions. **Description:** Check and provide alerts at the time of medication order based upon coded, active and non-active medications for possible interactions, allergies, sensitivities, intolerances, and other adverse reactions.			
1.	The system SHALL conform to function CPS.4.2.1 (Support for Medication Interaction and Allergy Checking) to determine allergic reactions, drug-drug interactions, and other potential adverse reactions, and render alerts or notifications when new medications are ordered.	CP.4.2.1	NC	EN
2.	The system SHALL conform to function CP.1.2 (Manage Allergy, Intolerance and Adverse Reaction List) to provide the ability to manage interaction and allergy checking and render alerts and notifications when new medications are ordered.	CP.4.2.1	NC	EN

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3.	The system MAY 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 uncoded or free text medication(s).	CP.4.2.1	NC	EN
4.	The system MAY provide the ability to render a notification, at the time a new uncoded medication is prescribed/ordered, that drug interaction, allergy, and formulary checking will not be performed, according to scope of practice, organizational policy, and/or jurisdictional law.	CP.4.2.1	NC	EN
5.	The system SHALL provide the ability to render and tag as inactive recently inactivated medications for inclusion in current medication screening according to scope of practice, organizational policy, and/or jurisdictional law.	CP.4.2.1	NC	EN
CP.4.2.2 Function	Patient-Specific Medication Dosing and Warnings	CP.4.2.2	NC	EN
	Statement: Render medication dosing and warnings related to a medication order based on patient-specific parameters. **Description:** Provide parameter-based (e.g., weight, lean body mass, age, sensitivity, genomics, body surface area) medication dosing recommendations and warnings for simple medications and compounded medications at the time of order entry.			
1.	The system SHALL conform to function CPS.4.2.2 (Support for Patient-Specific Dosing and Warnings) to determine potential adverse reactions and render alerts or notifications when new medications are ordered.	CP.4.2.2	NC	EN
2.	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.	CP.4.2.2	NC	EN
3.	The system MAY 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.	CP.4.2.2	NC	EN
4.	IF the system provides the ability to capture alternative patient dosing weight(s), THEN 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.	CP.4.2.2	NC	EN
5.	The system SHOULD provide the ability to render patient-specific medication dosing recommendations based on the patient's age and weight/body surface area.	CP.4.2.2	NC	EN
6.	The system MAY 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.	CP.4.2.2	NC	EN
7.	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).	CP.4.2.2	NC	EN
8.	The system MAY 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).	CP.4.2.2	NC	EN
9.	The system MAY render a notification requesting the parameters (e.g., coefficients, exponents, formulas) required to calculate the body surface area.	CP.4.2.2	NC	EN
10.	The system MAY provide the ability to determine and present dose ranges based on patient age.	CP.4.2.2	NC	EN
11.	The system MAY provide the ability to manage complex medication orders that include dosing based on either physical status or laboratory values.	CP.4.2.2	NC	EN
12.	The system SHALL provide the ability to determine and present drug dosing based on custom compounded medication components.	CP.4.2.2	NC	EN
13.	The system SHOULD provide the ability to manage medication orders with patient-specific dose calculations (e.g., by weight, body surface area or genotype).	CP.4.2.2	NC	EN
CP.4.2.3 Function	Medication Order Efficiencies	CP.4.2.3	NC	EN
	Statement: Provide the tooling necessary to increase the efficiency of medication ordering. **Description:** Make medication ordering workflows more efficient by allowing medications to be sorted and reviewed by key attributes (e.g., generic or trade names). Also support editing medication orders across multiple instances of an order and capturing medication orders in order sets.			
1.	The system SHOULD 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).	CP.4.2.3	NC	EN
2.	The system SHOULD 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).	CP.4.2.3	NC	EN
3.	The system SHOULD provide the ability for the clinician to edit medication administration instructions and link it to the corresponding instances of that medication order.	CP.4.2.3	NC	EN
4.	The system SHOULD provide the ability to extract, update and store a prescription reorder by allowing a prior prescription to be reordered without re-entering previous data (e.g., administration schedule, quantity, SIG).	CP.4.2.3	NC	EN
5.	The system SHOULD provide the ability to extract, update and store a prescription reorder 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).	CP.4.2.3	NC	EN
6.	The system MAY 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).	CP.4.2.3	NC	EN

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7. The system SHALL conform to function CP.4.1 (Use Order Sets).		CP.4.2.3	NC	EN
8. The system SHALL provide the ability to extract and render medications by generic, and/or brand name.		CP.4.2.3	NC	EN
CP.4.2.4 Function	Medication Alert Overrides	CP.4.2.4	NC	EN
Statement: Capture the alerts and warnings for medications being overridden and reasons for the override. **Description:** Alerts are generated for possible contraindications to administration of medications (e.g., the administration of tetracycline to pregnant women) and the prescriber may choose to override the alert.				
1. The system SHALL provide the ability to edit a medication order by overriding the drug alert or warning and transmitting the updated medication order.		CP.4.2.4	NC	EN
2. The system SHALL provide the ability to capture reasons for overriding a drug alert or warning at the time of ordering.		CP.4.2.4	NC	EN
3. The system SHALL provide the ability to tag and render an indication that a provider has overridden a drug alert or warning.		CP.4.2.4	NC	EN
CP.4.6 Function	Manage Orders for Referral	CP.4.6	NC	EN
Statement: Enable the origination, documentation and tracking of referrals between care providers or healthcare organizations, including clinical and administrative details of the referral, and consents and authorizations for disclosures as required. **Description:** Documentation and tracking of a referral from one care provider to another is supported, whether the referred to or referring providers are internal or external to the healthcare organization. Guidelines for whether a particular referral for a particular patient is appropriate in a clinical context and with regard to administrative factors such as insurance may be provided to the care provider at the time the referral is created. The EHR-S provides the ability to receive and act upon referral responses from providers. The EHR-S may provide the ability to capture completion of the referral appointment. Referrals may be received electronically (i.e. e-Referrals); or may be received non-electronically. If non-electronic, the system needs to allow the user to capture the referral information and manage referral request. If the system supports e-Referrals, then the system will also need to support additional functionality to manage the receipt of the referral request.			
1. The system SHALL provide the ability to manage outbound referrall(s) (e.g indicate that the referral was sent or received successfully), whether internal or external to the organization.		CP.4.6	C	EN
2. The system SHALL provide the ability to capture clinical details necessary for the referral according to scope of practice of the referral recipient.		CP.4.6	NC	EN
3. The system SHALL provide the ability to link (e.g., link to image stored in PACS) clinical details as necessary for the referral according to scope of practice of the referral recipient.		CP.4.6	NC	EN
4. The system SHALL provide the ability to render clinical details as appropriate for the referral according to scope of practice of the referral recipient (e.g., clinical details required for dermatologist differ from those required by oncologist).		CP.4.6	NC	EN
5. The system SHOULD provide the ability to capture administrative details (e.g., insurance information, consents and authorizations for disclosure) as necessary for the referral.		CP.4.6	NC	EN
6. The system SHOULD provide the ability to link to administrative details (e.g., insurance information, consents and authorizations for disclosure) as necessary for the referral.		CP.4.6	NC	EN
7. The system SHOULD provide the ability to render administrative details (e.g., insurance information, consents and authorizations for disclosure) as necessary for the referral.		CP.4.6	NC	EN
8. The system SHALL provide the ability to capture, store, and render the follow-up on the referral status (e.g 1, Completed; 2. In process; and 3. No follow-up).		CP.4.6	C	EN
9. The system SHALL 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).		CP.4.6	NC	EN
10. The system MAY provide the ability to capture a notification that the patient fulfilled a referred appointment.		CP.4.6	NC	EN
11. The system SHOULD provide the ability to determine and render diagnosis-based clinical guidelines for making a referral.		CP.4.6	NC	EN
12. The system SHOULD provide the ability to determine the contents of a referral order by rendering order sets for review by the provider.		CP.4.6	NC	EN
13. The System MAY provide the ability to present to the Healthcare Provider, at a selected interval after the referral to contact the family, to check to see if referral was completed.			N	EN
14. The systems SHOULD provide the ability to render a referral form to referral source indicating consent of guardian obtained, referral concern, follow-up requested.			N	EN
CP.7 Header	Manage Future Care	CP.7	NC	EN
Statement: Provide the functionality to manage treatment and care planning through presentation of guidelines and protocols as well as managing recommendations for future care. **Description:** The presentation of appropriate guidelines and protocols for future care and the capture and management of recommendations for future care are required to ensure lifetime care of the patient. This includes the management of recommendations for post-encounter care and linkage of recommendations to other components in the health record such as the problem lists and other source documentation.				

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
CP.7.1 Function	Present Guidelines and Protocols for Planning Care	CP.7.1	NC	EN
	Statement: Present organizational guidelines for patient care as appropriate to support planning of care, including order entry and clinical documentation. **Description:** Guidelines, and protocols presented for planning care may be site specific, community or industry-wide standards.			
	1. The system SHALL provide the ability to present current guidelines and protocols to providers who are creating plans for treatment and care.	CP.7.1	NC	EN
	2. The system SHOULD provide the ability to render a guideline or protocol based on appropriate criteria (such as problem or medication).	CP.7.1	NC	EN
	3. The system SHALL provide the ability to render previously used guidelines and protocols for historical or legal purposes.	CP.7.1	NC	EN
	4. IF decision support prompts are used to support a specific clinical guideline or protocol, THEN the system SHALL conform to function CPS.3.8 (Manage Documentation of Clinician Response to Decision Support Prompts).	CP.7.1	NC	EN
	5. IF the system supports context sensitive care plans, guidelines and protocols, THEN the system SHALL conform to function CPS.3.4 (Support for Context-Sensitive Care Plans, Guidelines, Protocols).	CP.7.1	NC	EN
CP.9 Header	Manage Care Coordination & Reporting	CP.9	NC	EN
	Statement: Provide the functionality required to coordinate care with other providers and report care provided. **Description:** During care provision it is necessary to coordinate care with other providers, internal or external to the organization, as well as to communicate the care provided.			
CP.9.1 Function	Produce a Summary Record of Care	CP.9.1	NC	EN
	Statement: Render a summarized review of a patient's episodic, and/or comprehensive EHR, subject to jurisdictional laws and organizational policies related to privacy and confidentiality. **Description:** Create summary views and reports at the conclusion of an episode of care. Create service reports at the completion of an episode of care such as, but not limited to, discharge summaries, specialist or consultation reports and public health reports, using information captured in the EHR and without additional input from clinicians.			
	1. The system SHALL provide the ability to render summaries of the patient's comprehensive EHR that include at a minimum: problem list, medication list, allergy and adverse reaction list, and procedures.	CP.9.1	NC	EN

3. Care Provision Support Section

Section Overview

The Care Provision Support Section focusses on functions required to support the provision of care to a specific patient to enable hands-on delivery of healthcare. This section is organized generally in alignment with Care Provision Section. For example, CP.4 (Manage Orders) is supported directly by CPS.4 (Support Orders). This alignment is designed to assist in finding related support functions related to care provision functions but is not expected to be 100% matched as some Care Provision Functions do not require matching Support functions or vice-versa. All functions within the Care Provision Support Section have an identifier starting with “CPS”.

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
CPS.1 Header	Record Management	CPS.1	NC	EN
	Statement: Manage the patient record including all patient demographics, identifiers and other information to support the provision of care. **Description:** Management of the patient record includes creation through quick registration or through a captured referral request as well as managing the patient encounter information linked to the appropriate patient record. It is also critical to manage the patient's relationships through genealogy, insurance, living situation or other means. This section also includes support for the management of patient and family preferences including patient advance directives, consents and authorizations linked to the unique patient record. For those functions related to data capture, data should be captured using standardized code sets or nomenclature, depending on the nature of the data, or captured as unstructured data. Care-setting dependent data are entered by a variety of caregivers. Data may also be captured from devices or other tele-health applications.			
CPS.1.4 Function	Capture Referral Request	CPS.1.4	NC	EN
	Statement: Enable the receipt and processing of referrals from care providers or healthcare organizations, including clinical and administrative details of the referral, and consents and authorizations for disclosures as required. **Description:** Incoming referrals may be from physicians' offices, specialists, clinics, Emergency Medical Services (EMS), transfers from other hospitals or emergency departments, nursing homes, etc. Referrals may be received electronically (i.e., e-Referrals); or may be received non-electronically. If non-electronic, the system needs to allow the user to capture the referral information and manage referral request. If the system supports e-Referrals, then the system will also need to support additional functionality to manage the receipt of the referral request. When a system receives a referral request the request must be validated against established criteria to determine if it meets the recipient's requirements and is appropriate. Referrals may be received for patients who do not previously exist in the recipient system and the system must allow for the ability to triage the request and respond to the requestor. If appropriate the system should allow for the creation of a patient record including the capture of clinical and administrative information received with the referral request. The management of information on patients who are inbound to the care setting is an important component of information management. Data must be easily accessible, centrally retrievable, updatable, transportable and reusable. Clinical data from provider to provider is essential to quality-coordinated care for patients referred to the care setting. Knowledge of patients who are expected to arrive helps both care setting and administrative staff plan resource use in real time.			
1. The system SHALL provide the ability to capture a completed developmental screening tool (s) in some form (e.g. paper, fax, electronic) from other care providers, whether internal or external to the organization.		CPS.1.4	C	EN
2. The system SHALL capture and render the source of the referral status (e.g, : 1) Caregiver only, 2) Professional, or 3) Both Caregiver and Professional)		CPS.1.4	C	EN
3. The system SHOULD provide the ability to import or receive a developmental screen from other care provider(s), whether internal or external to the organization		CPS.1.4	C	EN
4. The system SHALL conform to function CPS.2.1 (Support externally-sourced Clinical Documents) to support the capture of developmental screens.		CPS.1.4	C	EN
5. The system SHALL conform to function CPS.2.2 (Support externally-sourced Clinical Data) to support the capture of developmental screens.		CPS.1.4	C	EN
8. The system SHALL provide the ability to analyze and present recommendations for potential matches between the patient identified in a received developmental screen and existing patients in the system.		CPS.1.4	C	EN
11. The system SHOULD provide the ability to capture administrative details from a developmental screen that was received (e.g.,consent and authorization for disclosure).		CPS.1.4	C	EN
12. The system SHOULD provide the ability to capture clinical details from a developmental screen that was received.		CPS.1.4	C	EN
17. IF the system provides the ability to capture referrals electronically, THEN the system SHALL provide the ability for a user to enter information into a patient record from information received in the referral.		CPS.1.4	NC	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
CPS.1.7 Function	Preferences, Directives, Consents and Authorizations	CPS.1.7	NC	EN
	Statement: Capture and manage patient preferences, advance directives, consents and authorizations. **Description:** In the Preferences, Directives, Consents and Authorizations functions there are times when actions/activities related to "patients" are also applicable to the patient representative. Therefore, in this section, the term "patient" could refer to the patient, and/or the patient's personal representative (i.e. guardian, surrogate, proxy, health care agent).			
	1. The system SHOULD conform to function CPS.1.7.1 (Support for Patient and Family Preferences).	CPS.1.7	NC	EN
CPS.1.7.1 Function	Support for Patient and Family Preferences	CPS.1.7.1	NC	EN
	Statement: Support the integration of patient and family preferences into clinical decision support. **Description:** Decision support functions should permit consideration of patient/family preferences and concerns, such as with language, religion, culture, medication choice, invasive testing, and advance directives. Such preferences should be captured in a manner that allows for their integration with the health record and easy retrieval from the health record. Preferences may be specified across all treatment plans or specifically to individual or set of treatment plans. Preferences may also be used to adjust patient information including labeling and medication instructions (e.g., for language and print size).			
	1. The system SHALL provide the ability to capture, maintain and render patient and family preferences as they pertain to current treatment plans.	CPS.1.7.1	NC	EN
	2. 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).	CPS.1.7.1	NC	EN
	3. The system SHOULD provide the ability to analyze care guidelines and options relating to documented patient and family preferences, including standards of practice.	CPS.1.7.1	NC	EN
	4. The system SHOULD provide the ability to render prompts for testing and treatment options based on patient and family preferences.	CPS.1.7.1	NC	EN
	5. The system SHOULD provide the ability to render a comparison between standard practice and testing or treatment options based on patient and family preferences.	CPS.1.7.1	NC	EN
	6. The system MAY provide the ability to receive external materials (e.g., teaching materials and product labels) based on patient and family preferences.	CPS.1.7.1	NC	EN
	7. The system SHOULD provide the ability to integrate necessary documentation of patient and family preferences (e.g., living wills, advance directives, healthcare proxies, and specific consents or releases).	CPS.1.7.1	NC	EN
	8. The system SHALL provide the ability to present the correct form of the screen template based on caregiver/caregiver's primary or preferred language.		N	EN
CPS.2 Function	Support externally-sourced Information	CPS.2	NC	EN
	Statement: Capture and maintain a variety of information from multiple external sources. **Description:** External sources are those outside the EHR system, including clinical, administrative, and financial information systems, other EHR systems, Personal Health Record (PHR) systems, and data received through health information exchange networks.			
	1. The system SHOULD provide the ability to capture and store a reference to externally-sourced information.	CPS.2	NC	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
CPS.2.1 Function	Support externally-sourced Clinical Documents	CPS.2.1	NC	EN

Statement: Incorporate clinical documentation (computable and scanned) from external (to the system) sources.

Description: Mechanisms for incorporating external clinical documentation (including identification of source) are available. External is considered anything that is external to the system - i.e. documents from the organization; but created in another system would be considered 'external' for the purposes of this function. Documentation incorporated through these mechanisms is presented alongside locally captured documentation and notes wherever appropriate. This covers all types of documents received by the provider that would typically be incorporated into a medical record, including but not limited to faxes, referral authorizations, consultant reports, and patient/resident correspondence of a clinical nature. Intrinsic to the concept of electronic health records is the ability to exchange health information with other providers of health care services. Health information from these external sources needs to be received, stored in the patient record, and displayed upon request.

External data and documents addressed in the function include:

- Laboratory results received through an electronic interface - This information is to be received and stored in the resident record as discrete data, which means that each separate element of the data needs to be stored in its own field. Therefore, if laboratory results are received through an electronic interface, the results are received in the EHR and the laboratory test name, result (value), and unit of measure are correctly displayed as discrete data (vs. report format).

- Scanned documents received and stored as images (e.g., power of attorney forms, Living wills) - These scanned documents are indexed and can be retrieved based on the document type, date of the original document, and the date of scanning.

- Text-based outside reports (e.g., x-ray reports, hospital discharge summaries, history & physicals) - Any mechanism for capturing these reports is addendable: OCR, PDF, image file of report, etc.

- Clinical images from an external source (e.g., radiographic images, digital images from a diagnostic scan or graphical images) – These images may be stored within the system or be provided through direct linkage to an external source such as a hospital PACS system.

- Other forms of clinical results, such as wave files of EKG tracings.

- Medication detail (e.g., a medication history) from an external source such as a pharmacy, the patient, payer, or another provider - While the medication detail includes the medication name, strength, and SIG, this does not imply that the data will populate the medication module.

- Structured, text-based reports (e.g., medical summary text in a structured format).

- Standards-based structured, codified data (e.g., a Continuity of Care Document (CCD) with SNOMED CT).

Data incorporated through these mechanisms is presented alongside locally captured documentation and notes wherever appropriate.

1. The system SHALL provide the ability to capture, store and render external documents.	CPS.2.1	NC	EN
2. The system SHALL provide the ability to capture, store and render scanned documents.	CPS.2.1	NC	EN
3. The system SHOULD provide the ability to capture, store and render computable documents (e.g., CDA, ISO 13606, laboratory results or medication lists).	CPS.2.1	NC	EN
4. The system SHOULD provide the ability to store imaged documents or link to the imaged documents in imaging systems.	CPS.2.1	NC	EN
5. The system SHALL provide the ability to receive from an external source unstructured, text-based documents and reports.	CPS.2.1	NC	EN
6. The system SHOULD provide the ability to receive from an external source structured, text-based documents and reports.	CPS.2.1	NC	EN
7. The system SHALL provide the ability to tag and render scanned documents based on the document type, the date of the original document, and the date of scanning according to scope of practice, organizational policy, and/or jurisdictional law.	CPS.2.1	NC	EN
8. The system SHALL 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).	CPS.2.1	NC	EN
9. The system SHOULD conform to function TI.1.5 (Non-Repudiation) and TI.1.6 (Secure Data Exchange) when importing/receiving both structured and unstructured data.	CPS.2.1	NC	EN
10. The system MAY provide the ability to render a notification or alert based on information received from an external source according to scope of practice, organizational policy, and/or jurisdictional law.	CPS.2.1	NC	EN
11. IF a system receives information from external sources, THEN the system SHALL capture information regarding the identity of the source of that information.	CPS.2.1	NC	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
CPS.2.2 Function	Support externally-sourced Clinical Data	CPS.2.2	NC	EN

Statement: Incorporate discrete clinical data from external sources and support communication/presentation of data captured from medical and non-medical devices and entities.

Description: Mechanisms for incorporating external clinical data (including identification of source) are available and communication with non-medical devices and entities is supported as appropriate to the care setting such as an office or a patient's home. Externally-sourced data may be presented with locally-sourced documentation and notes wherever appropriate. This covers all types of data received by the provider that would typically be incorporated into a medical record, including but not limited to faxes, referral authorizations, consultant reports, and patient/resident correspondence of a clinical nature. Intrinsic to the concept of electronic health records is the ability to exchange health information with other providers of health care services. Health information from these external sources needs to be received, stored in the patient record, and displayed upon request.

Examples of externally-sourced data and documents include:

- Laboratory results received through an electronic interface.

This information is received and stored in the resident record as discrete data, which means that each separate element of the data needs to be stored in its own field. Therefore, if laboratory results are received through an electronic interface, the results are received in the EHR and the laboratory test name, result (value), and unit of measure are correctly displayed as discrete data (instead of in report or summarized format).

- Scanned documents received and stored as images (e.g., power of attorney forms or living wills).

These scanned documents are indexed and can be retrieved, e.g., based on the document type, date of the original document, and the date of scanning.

- Text-based outside reports (e.g., x-ray reports, hospital discharge summaries or history and physical examinations).

Any mechanism for capturing these reports is acceptable (e.g., OCR, PDF, JPG or TIFF).

- Clinical images from an external source (e.g., radiographic images, digital images from a diagnostic scan or graphical images).

These images may be stored within the system or be available by direct linkage to an external source (e.g., a hospital's picture archiving and communication system).

- Other forms of clinical results (e.g., EKG waveforms).

- Medication history from an external source such as a retail pharmacy, the patient, or another provider .

While the medication history includes the medication name, strength, and SIG, this does not imply that the data will populate the medication administration module. In many systems the medication administration module is populated from the medication order rather than from the medication history.

- Structured, text-based reports (e.g., medical summary text in a structured format).

- Standards-based structured, codified data (such as a standards-based referral letter that contains SNOMED CT codes).

Such data may be presented with locally-sourced documentation and notes wherever appropriate.

1. The system SHALL provide the ability to capture and store computable data (e.g., laboratory results, telemetry, or medication details).	CPS.2.2	NC	EN
2. The system SHALL provide the ability to capture and store a reference to external data.	CPS.2.2	NC	EN
3. The system SHALL provide the ability to capture and store externally-sourced computable data (e.g., laboratory results, telemetry, medication details).	CPS.2.2	NC	EN
4. The system SHALL provide the ability to capture and store externally-sourced standards-based structured, codified data.	CPS.2.2	NC	EN
5. The system SHOULD provide the ability to capture and store laboratory test data as discrete 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).	CPS.2.2	NC	EN
6. The system SHOULD provide the ability to capture and store externally-sourced clinical documentation as structured data, where appropriate, including the original, updates and addenda.	CPS.2.2	NC	EN
7. The system SHOULD provide the ability to capture and store health-related data from non-medical devices (e.g., digital camera or sound recorder).	CPS.2.2	NC	EN
8. The system SHOULD provide the ability to capture the original requisition ID number associated with an order.	CPS.2.2	NC	EN

CPS.2.3 Function	Support Emergency Medical System Originated Data	CPS.2.3	NC	EN

Statement: Provide the ability to capture and maintain patient information from an external Emergency Medical System (EMS).

Description: Emergency Medical Systems can provide care at the patient's location, prior to transport, or while enroute to medical facilities via ambulance, aeromedical evacuation and other transport mechanisms. Key parts of information about the patient can be gathered here, some of which is computable data (e.g., EKG and other telemetry), non-computable text-based and multimedia digital objects (e.g., images, audio reports and conversations).

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
1.	The system SHOULD provide the ability to capture and store information transmitted from the Emergency Medical Services (EMS) (e.g., wound site, nature of the wound, vital signs).	CPS.2.3	NC	EN
2.	The system MAY provide the ability to capture and store an audio file from an Emergency Medical Service.	CPS.2.3	NC	EN
CPS.2.4 Function	Support externally-sourced Clinical Images	CPS.2.4	NC	EN
	Statement: Incorporate clinical images from external sources and support communication/presentation of images from medical and non-medical devices and entities. **Description:** Mechanisms for incorporating external clinical images (including identification of source) are available and communication with non-medical devices and entities is supported as appropriate to the care setting such as an office or a patient's home. Externally-sourced images may be presented with locally-sourced documentation and notes wherever appropriate. This covers all types of images received by the provider that would typically be incorporated into a medical record. These image documents are indexed and can be retrieved, e.g., based on the document type, date of the original document, and the date of scanning. Images may also be stored within the system or accessed by reference to an external system (e.g., a hospital's picture archiving and communication system). Examples of image formats include OCR, PDF, JPG or TIFF. Examples of externally-sourced images include: - Laboratory results report images; - Radiographic images; - Images of power of attorney forms, living wills or birth certificates; - Graphs and charts; - Photographs or drawings of a patient's wounds; - Wave files of EKG tracings.			
1.	The system SHOULD provide the ability to capture, store and render clinical images (e.g., radiographs, pictures, video/audio, waveforms) received from external sources.	CPS.2.4	NC	EN
2.	The system SHOULD provide the ability to receive from an external source clinical result images (e.g., radiologic images).	CPS.2.4	NC	EN
3.	The system SHOULD provide the ability to receive from an external source other forms of clinical results (e.g., wave files of EKG tracings or psychological assessment results).	CPS.2.4	NC	EN
CPS.2.5 Function	Support patient-originated Data	CPS.2.5	NC	EN
	Statement: Capture and explicitly label patient-originated data, link the data source with the data, and support provider authentication for inclusion in patient health record. **Description:** It is critically important to be able to distinguish clinically authored and authenticated data from patient-originated data that is either provided by the patient for inclusion in the EHR or entered directly into the EHR by the patient from clinically authenticated data. Patients may provide data for entry into the health record or be given a mechanism for entering this data directly. Patient-originated data intended for use by providers will be available for their use. Data about the patient may be appropriately provided by: - the patient; - a surrogate (e.g., parent, spouse, guardian); - an informant (e.g., teacher, lawyer, case worker); or - devices (e.g., blood pressure/sugar monitors). An electronic health record may provide the ability for direct data entry by any of these. Patient-originated data may also be captured by devices and transmitted for inclusion into the electronic health record. Data entered by any of these must be stored with source information. A provider must authenticate patient-originated data included in the patient's legal health record. A provider must be able to indicate they have verified the accuracy of patient-originated data (when appropriate and when a verification source is available) for inclusion in the patient record. Such verification does not have to occur at each individual data field and can be at a higher level of the data.			
1.	The system SHALL provide the ability to capture the source of the developmental screening and tag the data using; 1) well child visit 2) outside sources such as childcare setting.	CPS.2.5	C	EN
3.	The system SHALL capture caregiver reported data distinctly from provider-sourced data (i.e. ensure that provider sourced data is not modified by caregiver -sourced data).	CPS.2.5	C	EN
4.	The system SHALL capture both structured and unstructured data as defined in RI.1.2.1 (Manage Record Entries).	CPS.2.5	NC	EN
5.	The system SHOULD provide the ability to transmit notifications to consumer health solutions, such as Personal Health Records (PHRs) or home monitoring devices.	CPS.2.5	NC	EN
6.	The system SHOULD provide the ability to receive notifications from consumer health solutions, such as PHRs or home monitoring devices.	CPS.2.5	NC	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
CPS.3 Header	Support Clinical Documentation	CPS.3	NC	EN
	Statement: Standard assessments, guidelines and prompts are provided to facilitate decision support for the optimization of patient care based on specific medical conditions. **Description:** Provider support is offered for the consideration of issues that would help assure optimal patient management. These may include standard assessments, care plans and treatment protocols, with triggers and prompts to assist during the patient encounter. Recommendation for patient testing and follow-up is also included along with decision support for patient self-management of a condition between patient-provider encounters.			
CPS.3.1 Function	Support for Standard Assessments	CPS.3.1	C	EN
	Statement: Support the establishment, updates and use of assessment forms that will assist in the development of and adherence to care plans, guidelines, and protocols at the point of information capture. **Description:** As part of managing assessment definitions, the system will support the ability to create a set of assessment forms and, optionally, associated logic (e.g., workflow, business and clinical rules). This assessment definition process may include the ability to define, revise and manage the tools, files and processing for the conduct of a patient assessment. Furthermore, the assessment definition may also include template development, prompts for additional information, related notification alerts and workflow processes. When a clinician fills out an assessment, data entered triggers the system to prompt the assessor to consider issues that would help assure a complete/accurate assessment. A simple demographic value or presenting problem (or combination) could provide a template for data gathering that represents best practice in this situation, e.g., Developmental Screening Tools for specific scope of practice. Support for standard assessment may include the ability to record and store the value for the answers to specific questions in standardized assessment tools or questionnaires. When a specific recognized-standard assessment does not exist, the system will support the creation of unique new, locally-defined assessment. The system may enable, and/or encourage the use of the format and data elements of similar assessments in the systems whenever possible. (NOTE: A new assessment may not necessarily be unique, since a facility may copy an assessment from another facility.)			
1.	The system SHALL provide the ability to capture, maintain, and render developmental screening information in the child's record.	CPS.3.1	C	EN
2.	The system MAY 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.	CPS.3.1	NC	EN
3.	The system SHALL render prompts based Developmental screening monitor to recommend additional assessment functions.	CPS.3.1	C	EN
4.	The system SHALL 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).	CPS.3.1	C	EN
5.	The system SHOULD conform to function CP.1.4 (Manage Problem List) and provide the ability to maintain the problem list by activating new problems and deactivating old problems as identified when captured using recognized-standard, and/or locally-defined assessments.	CPS.3.1	NC	EN
6.	The system SHOULD provide the ability to maintain recognized-standard, and/or locally-defined assessment information for problems identified on the patient's problem list.	CPS.3.1	NC	EN
8.	The system SHOULD 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).	CPS.3.1	C	EN
9.	The system SHALL provide the ability to manage assessment a templates for Developmental Screening for provider use in assessing patient child condition according to scope of practice, organizational policy, and/or jurisdictional law.	CPS.3.1	C	EN
10.	The system SHALL provide the ability to manage developmental screening templates according to scope of practice, organizational policy, and/or jurisdictional law.	CPS.3.1	C	EN
11.	The system MAY provide the ability to present the appropriate screening tools outside the mandated age parameters.		N	EN
12.	The system SHOULD provide the ability to present the standard question: “What changes have you seen in your child’s development since our last visit?”		N	EN
13.	The system SHALL provide the ability to capture for the documentation of other developmental monitoring questions. The system should allow "Yes" and enable 1.1.7 to document note or "No"		N	EN
14.	The system SHALL provide the ability to present the standard question: “Do you have any concerns about your child’s hearing" The system should allow "Yes" and enable 1.1.7 to document note or "No".		N	EN
15.	The system SHALL provide the ability to present the standard question: “Do you have any concerns about your child’s vision?" The system should allow "Yes" and enable 1.1.7 to document note or "No" and go on to next question.		N	EN
16.	The system SHALL provide the ability to present the standard question: “Do you have any concerns about your child’s learning?" The system should allow "Yes" and enable 1.1.7 to document note or "No" and go on to next question.		N	EN
17.	The system SHALL provide the ability to present the standard question: “Do you have any concerns about your child’s behavior?" The system should allow "Yes" and enable 1.1.7 to document note or "No" and go on to next question.		N	EN

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18.	The system SHALL provide the ability to present the standard question: “Do you have any concerns about your child’s development?" The system should allow "Yes" and enable 1.1.7 to document note or "No" and go on to next question.		N	EN
CPS.3.2 Function	Support for Patient Context- Driven Assessments	CPS.3.2	NC	EN
	Statement: Offer prompts based on patient-specific data at the point of information capture for assessment purposes. **Description:** When a clinician fills out an assessment, data entered is matched against data already in the system to identify potential linkages and optimize patient care. For example, the system could scan the medication list and the knowledge base to see if any of the symptoms are side effects of medication already prescribed. Important diagnoses could be brought to the doctor's attention, for instance ectopic pregnancy in a woman of child bearing age, or appendicitis in a geriatric patient who has abdominal pain.			
1.	The system SHOULD provide the ability to analyze assessment data entered during the encounter against health evidence based standards and best practices.	CPS.3.2	NC	EN
2.	The system MAY analyze 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).	CPS.3.2	NC	EN
3.	The system SHOULD provide the ability to analyze assessment data against data in the patient-specific problem list.	CPS.3.2	NC	EN
4.	The system SHOULD provide the ability to manage care setting specific templates.	CPS.3.2	NC	EN
5.	The system MAY provide the ability to render alerts based on patient-specific clinical data (e.g., age for neonates, pediatrics, geriatrics; conditions for impaired renal function; medication).	CPS.3.2	NC	EN
6.	The system SHOULD provide the ability to maintain integrated, chief complaint -driven documentation templates.	CPS.3.2	NC	EN
7.	The system SHOULD provide the ability to maintain integrated, diagnosis-driven documentation templates.	CPS.3.2	NC	EN
8.	The system SHOULD provide the ability to maintain integrated, disposition-driven documentation templates.	CPS.3.2	NC	EN
CPS.3.3 Function	Support for Standard Care Plans, Guidelines, Protocols	CPS.3.3	NC	EN
	Statement: Support the use of appropriate standard care plans, guidelines, protocols, and/or clinical pathways for the management of specific conditions. **Description:** A core capability of Clinical Decision Support is that of providing guidelines, plans and protocols to clinicians. These templates or forms can be specific for populations, medical conditions or individual patients. Before they can be used in care provision standard care plans, guidelines, protocols, and clinical pathways must be created. These templates or forms may reside within the system or be provided through links to external sources, and can be modified and used on a site specific basis. To facilitate retrospective decision support, variances from standard care plans, guidelines, protocols and clinical pathways can be identified and reported.			
1.	The system SHOULD provide the ability to capture and maintain site-specific care plans, guidelines, protocols, and clinical pathways.	CPS.3.3	NC	EN
2.	The system SHOULD provide the ability to maintain site-specific modifications to standard care plans, guidelines, protocols, and clinical pathways obtained from outside sources.	CPS.3.3	NC	EN
3.	The system SHOULD 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 of when a developmental screening is due.	CPS.3.3	C	EN
4.	The system SHOULD 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.	CPS.3.3	NC	EN
5.	The system SHOULD conform to function POP.4 (Support for Monitoring Response Notifications Regarding a Specific Child's Health and Development).	CPS.3.3	C	EN
6.	The system SHALL conform to function CPS.3.4 (Support for Context-Sensitive Care Plans, Guidelines, Protocols).	CPS.3.3	NC	EN
7.	The system SHALL conform to function CPS.3.1 (Support for Standard Assessments).	CPS.3.3	NC	EN
8.	The system SHOULD provide the ability to capture, maintain and render guidelines for time for developmental screening (e.g., based on age).	CPS.3.3	C	EN
10.	The system MAY provide the ability to maintain standard choices for disposition (e.g., reviewed and filed, recall patient, or future follow-up).	CPS.3.3	NC	EN
12.	The system SHOULD provide the ability to tag and render an indicator that a developmental screening for a patient record is incomplete (e.g., not finalized or authenticated/signed).	CPS.3.3	C	EN
14.	The system SHOULD tag specific missing elements/sections of an incomplete developmental screening.	CPS.3.3	C	EN
16.	The system SHOULD provide the ability to present validated screening tools such as indicated in AAP/CDC Roadmap to Integrate Developmental Screening into Electronic Health Records		N	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
CPS.3.4 Function	Support for Context-Sensitive Care Plans, Guidelines, Protocols	CPS.3.4	NC	EN
	Statement: Identify and present the appropriate care plans, guidelines, protocols, and/or clinical pathways for the management of patient-specific conditions that are identified in a patient clinical encounter. **Description:** At the time of the clinical encounter (problem identification), recommendations for tests, treatments, medications, immunizations, referrals and evaluations are presented based on evaluation of patient-specific data such as age, gender, developmental stage, their health profile, and any site-specific considerations. These may be modified on the basis of new clinical data at subsequent encounters.			
1.	The system SHALL provide the ability to render care and treatment plans that are sensitive to the results of developmental screenings.	CPS.3.4	C	EN
2.	The system SHOULD provide the ability to capture and maintain the choice of action in response to care plan suggestions.	CPS.3.4	NC	EN
3.	The system SHOULD determine and render alerts, notifications, and reports about variances from standard care plans, guidelines, protocols, and clinical pathways.	CPS.3.4	NC	EN
4.	The system SHALL conform to function CPS.3.1 (Support for Standard Assessments).	CPS.3.4	NC	EN
5.	The system SHALL conform to function CPS.3.2 (Support for Patient Context-Driven Assessments).	CPS.3.4	NC	EN
6.	The system SHALL conform to function CPS.3.3 (Support for Standard Care Plans, Guidelines, Protocols).	CPS.3.4	NC	EN
7.	The system SHOULD provide the ability to capture, maintain, and render specialized medical treatment guidelines and protocols for unique physical, chemical, biological, and radiologic exposures.	CPS.3.4	NC	EN
8.	The system SHOULD provide the ability to manage developmental screening data , such as results and care plans, to identify, track and provide alerts, notifications and reports about variances, care plans, guidelines and protocols.	CPS.3.4	C	EN
9.	The system SHALL 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.	CPS.3.4	NC	EN
10.	The system SHOULD provide the ability to capture care plan templates from previously developed care plans.	CPS.3.4	NC	EN
11.	The system SHALL provide the ability to present the correct form of the screening tool based on child's age adjusted for prematurity when the child is <37 weeks gestation and younger than 25 months, if GA is available in EHR.		N	EN
12.	The system SHALL provide the ability to present the correct form of the screener based on child's age		N	EN
13.	The system SHALL provide the ability to capture the child's age in months and days to determine if due for a developmental screen. For example, if the child's age is 9, 18, 24 or 30 months + or - 3 months the child is eligible for developmental screening.		N	EN
CPS.3.8 Function	Manage Documentation of Clinician Response to Decision Support Prompts	CPS.3.8	NC	EN
	Statement: Capture the decision support prompts and manage provider actions to accept or override decision support prompts. **Description:** Provider actions in response to prompts offered from decision support are captured. Management of these actions be accomplished at the patient level or aggregated for patient population, research protocol, or organizational trending.			
1.	The system SHALL provide the ability to capture that clinical decision support prompts have been rendered and user response to accept or override those prompts.	CPS.3.8	NC	EN
2.	The system SHALL provide the ability to capture the reason for variation from the decision support prompt.	CPS.3.8	NC	EN
3.	The system SHOULD provide the ability to render recorded variances from decision support prompts.	CPS.3.8	NC	EN
4.	The system MAY 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).	CPS.3.8	NC	EN
CPS.4 Header	Support Orders	CPS.4	NC	EN
	Statement: Support for Orders is required to ensure that appropriate decision support and safety checks are conducted by the system at the time of ordering as well as at the time of dispensing medications or immunizations. **Description:** Support for orders includes the management of order set templates, the support for specific types of orders including medication, immunization, non-medication, diagnostic tests as well as blood products and biologicals. Decision Support for orders includes checking for allergies or adverse interactions, dosing checking and issuing the appropriate warnings. It may also include functions to increase ordering efficiency such as verifying all necessary information to fulfill the order is captured and making recommendations for supporting orders. A component of ordering medications and immunizations is the dispensing of those orders and, where applicable, this function will include criteria to support dispensing. Note: Administration of Orders is included in CPS.6 (Support for Treatment Administration).			

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
CPS.4.1 Function	Manage Order Set Templates	CPS.4.1	NC	EN
	Statement: Maintain order set templates based on preferred standards, provider preferences, organizational policy or other criteria. **Description:** Order set templates, which may include medication orders, allow a care provider to choose common orders for a particular circumstance or disease state according to standards (e.g., best practice guidelines) or other criteria. Order Set Templates may be defined to allow or not allow the provider to modify (add/remove/update) specific orders when applying them to a specific patient.			
1.	The system SHALL provide the ability to manage order set templates, including creation from provider input and version control.	CPS.4.1	NC	EN
2.	The system MAY capture an order set template based on a specific patient's orders/data according to scope of practice, organizational policy, and/or jurisdictional law.	CPS.4.1	NC	EN
3.	The system SHOULD provide the ability to manage order set templates created for conditions or diseases.	CPS.4.1	NC	EN
4.	The system MAY 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).	CPS.4.1	NC	EN
5.	The system MAY render order set templates to providers based on diagnoses, conditions, or symptoms to aid decision support.	CPS.4.1	NC	EN
6.	The system SHALL conform to function CP.4.1 (Use Order Sets).	CPS.4.1	NC	EN
7.	The system SHOULD 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).	CPS.4.1	NC	EN
8.	The system SHOULD capture, maintain and render order set templates customized by patient age, sex, or other patient factors.	CPS.4.1	NC	EN
9.	The system SHOULD capture, maintain and render order set templates customized by provider type.	CPS.4.1	NC	EN
10.	The system MAY capture, maintain and render order set templates customized by provider.	CPS.4.1	NC	EN
11.	The system SHOULD capture, maintain and render standing order set templates for triage or for specific conditions.	CPS.4.1	NC	EN
12.	The system MAY provide the ability to manage links or access to applicable clinical standards and reference materials within an order set.	CPS.4.1	NC	EN
13.	The system SHOULD provide the ability to capture, maintain and render the date that an order set was last modified.	CPS.4.1	NC	EN
14.	The system SHOULD provide the ability to capture, maintain and render order set templates that are pre-configured with order entry information.	CPS.4.1	NC	EN
15.	The system SHOULD provide the ability to capture, maintain and render multiple choices of orders within an order set template for clinician selection.	CPS.4.1	NC	EN
16.	The system SHOULD provide the ability to capture, maintain and render text instructions or recommendations within order sets.	CPS.4.1	NC	EN
17.	The system SHALL provide the ability to capture a name for an order set.	CPS.4.1	NC	EN
18.	The system SHALL provide the ability to render order set(s) by name.	CPS.4.1	NC	EN
19.	The system SHALL 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).	CPS.4.1	NC	EN
20.	The system SHOULD provide the ability to integrate order sets within other order sets.	CPS.4.1	NC	EN
21.	The system SHALL 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.	CPS.4.1	NC	EN
22.	The system MAY 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.	CPS.4.1	NC	EN
23.	The system SHALL 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 can't be modified during care provision).	CPS.4.1	NC	EN
24.	The system MAY provide the ability to capture and maintain order set preferences.	CPS.4.1	NC	EN
CPS.4.2 Function	Support for Medication and Immunization Ordering	CPS.4.2	NC	EN
	Statement: Provide functionality to alert providers to potential medication and immunization ordering errors (such as wrong patient, wrong drug, wrong dose, wrong route and wrong time). **Description:** During medication or immunization ordering it is critical to minimize potential errors that can cause adverse events. This is accomplished by the EHR system through the use of clinical decision support and prompting to validate the order at time of ordering. Whist many of these functions are more commonly associated with medication ordering; they also apply to ordering of immunizations when such ordering occurs. The support includes the checking for drug/drug interactions, checking against documented allergies or previous adverse events, as well as validating patient-specific dosing and providing appropriate warnings. Support for medical ordering efficiencies also ensures that orders are appropriate and contain all required supporting information.			

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
CPS.4.2.1 Function	Support for Medication Interaction and Allergy Checking	CPS.4.2.1	C	EN
	Statement: Identify medication interaction warnings at the time of medication or immunization ordering, or prescribing, as well as at the time of dispensing. **Description:**			
1.	The system SHALL determine and present the presence of interactions between medications ordered and medications already on the current medication list.	CPS.4.2.1	NC	EN
2.	The system SHALL determine and present the presence of interactions between medications ordered and true-allergies on the current allergy list.	CPS.4.2.1	NC	EN
3.	The system SHOULD 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).	CPS.4.2.1	NC	EN
4.	The system MAY determine and present the presence of interactions between medications ordered and ingestibles (e.g., food or beverages).	CPS.4.2.1	NC	EN
5.	The system MAY determine and render the presence of interactions between medications ordered, medications on the current medication list as well as previous medications according to organization policy, and/or jurisdictional law.	CPS.4.2.1	NC	EN
6.	The system SHOULD determine and present the presence of interactions between medications ordered and supplements (i.e. herbal or dietary) on the current medication list.	CPS.4.2.1	NC	EN
7.	The system SHALL provide the ability to capture, maintain and render a medication order despite alerts for interactions, and/or allergies being present.	CPS.4.2.1	NC	EN
8.	The system SHOULD provide the ability to determine and present the presence of duplicate therapies.	CPS.4.2.1	NC	EN
9.	The system SHALL conform to function CPS.3.8 (Manage Documentation of Clinician Response to Decision Support Prompts) and provide the ability to document why a drug interaction warning was overridden.	CPS.4.2.1	NC	EN
10.	The system SHOULD 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.	CPS.4.2.1	NC	EN
11.	The system SHOULD provide the ability to determine, maintain, and present medications noted to be ineffective for the patient in the past.	CPS.4.2.1	NC	EN
12.	The system SHALL 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.	CPS.4.2.1	NC	EN
13.	The system SHOULD present the rationale for a medication interaction alert.	CPS.4.2.1	NC	EN
14.	The system SHALL conform to function CP.1.3 (Manage Medication List) in order to maintain a coded list of medications for the patient (including a unique identifier for each medication).	CPS.4.2.1	NC	EN
15.	The system MAY render an alert to the user if the medication interaction information or database has not been updated within a set time parameter.	CPS.4.2.1	NC	EN
16.	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) according to scope of practice, organizational policy, and/or jurisdictional law.	CPS.4.2.1	NC	EN
CPS.4.2.2 Function	Support for patient-specific Dosing and Warnings	CPS.4.2.2	NC	EN
	Statement: Identify and present appropriate dose recommendations based on known patient conditions and characteristics at the time of medication ordering and dispensing. **Description:** The clinician is alerted to patient-specific contraindications and warnings e.g., pregnancy, breast-feeding or occupational risks, hepatic or renal insufficiency. The preferences of the patient may also be presented (e.g., reluctance to use an antibiotic). Additional patient parameters, such as age, gestation, genetic disposition, height, weight, and Body Surface Area (BSA), shall also be incorporated.			
1.	The system SHALL determine and render contraindications to the ordered dosage range.	CPS.4.2.2	NC	EN
2.	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).	CPS.4.2.2	NC	EN
3.	The system SHOULD conform to function CPS.9.2.3 (Support for Provider Pharmacy Communication) to support transmitting documented reasons for overriding a medication alert to the pharmacy .	CPS.4.2.2	NC	EN
4.	IF the maximum daily doses are known, THEN the system SHALL present the maximum dose per day in dosing decision support.	CPS.4.2.2	NC	EN
5.	The system SHOULD provide the ability to determine and render medication dose by patient body weight.	CPS.4.2.2	NC	EN
6.	The system SHOULD provide the ability to determine and render medication dose by body surface area.	CPS.4.2.2	NC	EN

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7.	The system SHOULD provide the ability to determine and render medication dose recommendations based on patient parameters, including age and diagnostic test results.	CPS.4.2.2	NC	EN
8.	The system MAY 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.	CPS.4.2.2	NC	EN
9.	The system SHOULD determine whether no recommended pediatric medication dosing is available and render notifications to the provider according to scope of practice.	CPS.4.2.2	NC	EN
10.	The system SHOULD determine and render medication dosages using all components of a combination medication (e.g., acetaminophen-hydrocodone).	CPS.4.2.2	NC	EN
11.	The system SHOULD provide the ability to capture the factors used to calculate the future dose for a given prescription.	CPS.4.2.2	NC	EN
12.	The system SHALL determine whether data required to compute a dose are missing or invalid and render notifications to the provider.	CPS.4.2.2	NC	EN
13.	IF the system determines a value that affects medication dosing recommendations (e.g., creatinine clearance), THEN the system SHOULD maintain the formula used for the calculation.	CPS.4.2.2	NC	EN
14.	IF the system supports electronic communication with the pharmacy system, THEN the system SHOULD provide the ability to transmit the documented reasons for overriding a medication alert.	CPS.4.2.2	NC	EN
15.	The system SHOULD provide the ability to determine and maintain the cumulative drug dose.	CPS.4.2.2	NC	EN
16.	The system SHOULD determine and render a notification if the cumulative medication dose exceeds the recommended dose.	CPS.4.2.2	NC	EN
17.	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".	CPS.4.2.2	NC	EN
18.	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.	CPS.4.2.2	NC	EN
19.	The system SHOULD provide the ability to determine and render recommended medication for substitution based on availability, cost, generic equivalent, and according to organizational policy, and/or jurisditional law.	CPS.4.2.2	NC	EN
20.	The system SHALL 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).	CPS.4.2.2	NC	EN
21.	The system SHOULD provide the ability to capture and render medication warnings and recommendations from official governmental agencies (e.g., FDA, regional centers).	CPS.4.2.2	NC	EN
22.	The system SHOULD provide the ability to extract reference information for prescribing/warning (e.g., FDA warnings in the US realm).	CPS.4.2.2	NC	EN
23.	The system MAY provide the ability to store configuration parameters (e.g., coefficients, exponents, formulas) regarding the patient's body surface area.	CPS.4.2.2	NC	EN
CPS.4.2.4 Function	Support for Medication Recommendations	CPS.4.2.4	NC	EN
	Statement: Offer recommendations and options in medication treatment protocols as well as supporting medication monitoring on the basis of patient diagnosis, patient characteristics, or therapeutic guidelines and protocols. **Description:** The system should list medication treatment options on the basis of practice standards and the patient's conditions, diagnoses and characteristics (e.g., obesity, occupation). The system may also provide prompts and notifications to support medication monitoring.			
1.	The system SHALL conform to function CPS.4.2.2 (Support for Patient-Specific Dosing and Warnings).	CPS.4.2.4	NC	EN
2.	The system SHOULD determine and present recommendations for medication regimens based on findings related to the patient diagnosis.	CPS.4.2.4	NC	EN
3.	The system SHALL determine and present recommendations for alternative medication treatments on the basis of practice standards, patient conditions and characteristics.	CPS.4.2.4	NC	EN
4.	The system SHOULD determine and render recommendations for monitoring (e.g., labs, behaviors, adverse reactions, side effects) as appropriate to a particular medication.	CPS.4.2.4	NC	EN
CPS.4.6 Header	Support for Referrals	CPS.4.6	NC	EN
	Statement: Evaluate patient information for referral indicators. **Description:** The system assists with patient referrals, including prompting the provider with referral recommendations based on the patient's medical record. When creating the referral order, support is provided in the compilation of relevant clinical and behavioral health results, demographic and insurance information (if available). Standardized or evidence based protocols for workup prior to referral may also be presented.			

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
CPS.4.6.3 Function	Support for Electronic Referral Ordering	CPS.4.6.3	NC	EN
	Statement: Enable the transmission of electronic referral orders from the EHR-S. **Description:** When a referral order is created in the system, the system should have the ability to compose the referral package, including any supporting clinical and administrative information, and transmit the referral order to the referred-to provider electronically.			
1.	The system SHALL 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 organization.	CPS.4.6.3	NC	EN
2.	The system SHOULD provide the ability to capture and maintain a minimum set of required information that must be included in an e-referral to be transmitted.	CPS.4.6.3	NC	EN
3.	IF the system provides the ability to capture a minimum set of required information that must be included in an e-referral to be transmitted, THEN the system SHALL determine if the minimum set of information is satisfied prior to transmitting an e-referral.	CPS.4.6.3	NC	EN
4.	IF the system provides the ability to capture a minimum set of required information that must be included in an e-referral to be transmitted and determines that the minimum set is not satisfied, THEN the system SHALL render prompts to capture missing information prior to transmitting an e-referral.	CPS.4.6.3	NC	EN
5.	The system SHALL provide the ability to capture administrative information (e.g., insurance information, consents and authorizations for disclosure) for inclusion in an e-referral according to scope of practice, organizational policy, and/or jurisdictional law.	CPS.4.6.3	NC	EN
6.	The system SHALL provide the ability to capture clinical information (e.g., medications, diagnostic results) for inclusion in an e-referral.	CPS.4.6.3	NC	EN
7.	The system SHALL provide the ability to present e-referrals, including all attached information, and capture an e-signature prior to transmission.	CPS.4.6.3	NC	EN
8.	The system MAY 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).	CPS.4.6.3	NC	EN
9.	IF the system provides the ability to capture diagnosis-based requirements for sending an e-referral based on the referred-to provider's requirements, THEN the system SHALL provide the ability to present those requirements at the time of referral order entry.	CPS.4.6.3	NC	EN
10.	The system MAY provide the ability to capture a set of clinical requirements (e.g., history, physical examination, laboratory or Radiology results) for sending an e-referral based on the provider's requirements.	CPS.4.6.3	C	EN
12.	The system SHALL capture and render a electronic acceptance or rejection of an e-referral request.	CPS.4.6.3	NC	EN
13.	The system SHALL capture and render the reason for an e-referral acceptance or rejection.	CPS.4.6.3	NC	EN
14.	The system MAY capture a standards-based coded reason (e.g., SNOMED) for an e-referral acceptance or rejection.	CPS.4.6.3	NC	EN
15.	The system SHOULD capture and render an electronic request for additional information from the referred-to provider.	CPS.4.6.3	NC	EN
16.	The system SHALL provide the ability to annotate an e-referral order with additional information.	CPS.4.6.3	NC	EN
17.	The system SHOULD provide the ability to export or transmit a copy of an e-referral, including all supporting clinical and administrative information, to another care provider (s), whether internal or external to the organization (e.g., in case the other provider failed to receive or inadvertently deleted the e-referral).	CPS.4.6.3	NC	EN
18.	The system MAY conform to function AS.9.2 (Support Financial Eligibility Verification) and display the results of e-referral eligibility and health plan/payer checking prior to approval of an referral order.	CPS.4.6.3	NC	EN
CPS.8 Header	Support Patient Education & Communication	CPS.8	NC	EN
	Statement: Support for appropriate communication with the patient or the patient representatives. **Description:** Support for patient education and communication is critical to ensure that the patient can appropriately participate in his care. This includes providing access to relevant patient educational materials and reminders from internal, and/or external sources.			

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
CPS.8.4 Function	Support for Communications Between Provider and Patient, and/or the Patient Representative	CPS.8.4	NC	EN
	Statement: Facilitate communications between providers and patients, and/or the patient representatives. **Description:** Providers are able to communicate with patients and others, capturing as specified by the business rules the nature and content of electronic communication, or the time and details of other communication. Examples: - When test results arrive, the clinician may wish to email the patient that test result was normal (details of this communication are captured). - A patient may wish to request a refill of medication by emailing the physician. - Patients with asthma may wish to communicate their peak flow logs/diaries to their provider. - Hospital may wish to communicate with selected patients about a new smoking cessation program. - Automated notification regarding annual flu shots			
1.	The system SHALL provide the ability to capture and store documentation of communications between providers and patients and/ or the patient representatives.	CPS.8.4	NC	EN
2.	The system SHALL provide the ability to capture scanned documents.	CPS.8.4	NC	EN
3.	The system SHOULD provide the ability to receive and transmit information between providers and patients or their representative using a secure internet connection.	CPS.8.4	NC	EN
4.	The system SHALL provide the ability to manage authorizations documentation for family member or patient representative to receive patient related health information.	CPS.8.4	NC	EN
5.	The system SHOULD render an alert to providers regarding the presence of communications that originated from the patient or patient representative.	CPS.8.4	NC	EN
6.	The system SHOULD transmit a notification regarding the provider's unavailability (e.g., vacations) when the provider receives information or requests electronically based on user-defined configuration (e.g., email out-of-office notification).	CPS.8.4	NC	EN
7.	The system MAY determine alternate routing of information or requests received when the provider is unavailable based on user-defined configuration and transmit a notification of the routing (e.g., alternate provider covering for vacation).	CPS.8.4	NC	EN
8.	The system MAY provide the ability to render a notification of events and new treatment options to providers.	CPS.8.4	NC	EN
9.	The system MAY provide the ability to transmit to the patient or patient representative reminders of events related to their care (e.g., upcoming appointments) as agreed upon by the patient, and/ or the patient representative.	CPS.8.4	NC	EN
10.	The system MAY provide the ability to capture and transmit information between providers and patient groups.	CPS.8.4	NC	EN
11.	The system SHALL provide the ability to render notifications, manually, and/or automatically, to patients for conditions and results that require follow-up, according to scope of practice, organizational policy, and/or jurisdictional law, and to update the patient record with the fact that this was done.	CPS.8.4	NC	EN
12.	The system SHALL provide the ability to render information (e.g., electronic, paper, CD-ROM) to patients and to update the patient record with the fact that this was done.	CPS.8.4	NC	EN
13.	The system MAY provide the ability to render a notification to the patient when specific medication doses are due, and/or when diagnostic/screening tests are due.	CPS.8.4	NC	EN
14.	The system SHOULD provide the ability for the provider to capture an authorization for the transmittal of medication renewal data to an external system and transmittal of a notice to patient via preconfigured notification channel, one of which may be a Consumer Health Solution or a Personal Health Record, according to scope of practice, organizational policy, and/or jurisdictional law.	CPS.8.4	NC	EN
CPS.9 Header	Support Care Coordination & Reporting	CPS.9	NC	EN
	Statement: Support exchange and reporting of information between participants in patient-centered care. **Description:** Provide the support necessary to ensure that appropriate communication between providers is possible to coordinate the patient's care including, clinical communication between providers, standard and ad-hoc reporting and information views of the patient record.			

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
CPS.9.2 Function	Support for Inter-Provider Communication	CPS.9.2	NC	EN
	Statement: Support exchange of information between providers as part of the patient care process, and the appropriate documentation of such exchanges. Support secure communication to protect the privacy of information as required by jurisdictional law. **Description:** Communication among providers involved in the care process can range from real time communication (for example, communication between a therapist and nurse), to asynchronous communication (e.g., consult reports between physicians). Some forms of inter-practitioner communication will be paper based and the EHR-S must be able to produce appropriate documents. The system should provide for both verbal and written communication. These exchanges would include but not be limited to consults, and referrals as well as possible exchanges within the office as part of the provision and administration of patient care (e.g., the communication of new information obtained within the office environment during the process of administration of a tetanus shot while the patient is in the exam room).The system should support the creation and acceptance of paper artifacts where appropriate.			
	2. The system SHALL provide the ability to integrate scanned documents from providers into the patient record.	CPS.9.2	NC	EN
	3. The system SHOULD provide the ability to receive and transmit messages or information in real time.	CPS.9.2	NC	EN
	4. The system SHOULD provide the ability to receive and transmit clinical information (e.g., referrals) via secure e-mail or other secure standard electronic means.	CPS.9.2	NC	EN
CPS.9.2.3 Function	Support for Provider -Pharmacy Communication	CPS.9.2.3	NC	EN
	Statement: Provide features to enable secure bi-directional communication of information electronically between practitioners and pharmacies or between practitioner and intended recipient of pharmacy orders. **Description:** When a medication is prescribed, the order is routed to the pharmacy or other intended recipient of pharmacy orders. This information is used to avoid transcription errors and facilitate detection of potential adverse reactions. If there is a question from the pharmacy, that communication can be presented to the provider with their other tasks. In certain environments, medication order creation is a collaborative process involving the prescriber and facility staff. Accordingly, this function applies to communication process between the prescriber, facility and the pharmacy or other intended recipient of pharmacy orders. The transmission of prescription data between systems should conform to realm acceptable messaging standards. Informative examples: - HL7 Clinical Document Architecture Release 2 - ISO/EN 13606 Electronic Health Record Communication - CEN ENV 13607:2000. Health informatics. Messages for the exchange of information on medicine prescriptions - X12N healthcare transactions - US realm: National Council for Prescription Drug Programs (NCPDP) - Canadian realm: National Electronic Claims Standard (NeCST)			
	1. The system SHALL conform to function CP.4.2 (Manage Medication Orders) and provide the ability to transmit medication orders.	CPS.9.2.3	NC	EN
	2. The system SHALL provide the ability for a prescriber/provider to transmit orders, prescriptions, eligibility inquiries, acknowledgements and renewal responses electronically to a pharmacy to initiate, change, cancel, or renew a medication order.	CPS.9.2.3	NC	EN
	3. The system SHALL provide the ability to receive any acknowledgements, prior authorizations, renewals, inquiries and fill notifications provided by the pharmacy or other participants in the electronic prescription process.	CPS.9.2.3	NC	EN
	4. The system SHOULD provide the ability to exchange clinical information with pharmacies using current realm-specific messaging or services standards.	CPS.9.2.3	NC	EN
	5. The system MAY provide the ability for providers and pharmacies to receive and transmit clinical information via secure e-mail or other electronic means, on both general and specific orders.	CPS.9.2.3	NC	EN
	6. The system SHALL provide the ability to receive and transmit secure real-time messages or services.	CPS.9.2.3	NC	EN
	7. The system MAY provide the ability to transmit information on workflow tasks as part of communication to the provider.	CPS.9.2.3	NC	EN
	8. The system SHOULD provide the ability to transmit a request to the pharmacy (based on an existing order) that additional medication be delivered (i.e. re-supply request).	CPS.9.2.3	NC	EN
	9. The system SHOULD provide the ability to receive and transmit drug utilization review (DUR) findings and formulary & benefits (F&B) data with the pharmacy using standards-based messaging.	CPS.9.2.3	NC	EN
	10. The system SHOULD provide the ability to capture authorization 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), according to scope of practice, organizational policy, and/or jurisdictional law.	CPS.9.2.3	NC	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
CPS.9.3 Function	Health Record Output	CPS.9.3	NC	EN
	Statement: Support the definition of the formal health record, a partial record for referral purposes, or sets of records for other necessary disclosure purposes. **Description:** Provide hardcopy and electronic output that fully chronicles the healthcare process, supports selection of specific sections of the health record, and allows healthcare organizations to define the report, and/or documents that will comprise the formal health record for disclosure purposes. A mechanism should be provided for both chronological and specified record element output. This may include defined reporting groups (i.e. print sets). For example Print Set A = Patient Demographics, History & Physical, Consultation Reports, and Discharge Summaries. Print Set B = all information created by one caregiver. Print Set C = all information from a specified encounter. An auditable record of these requests and associated exports may be maintained by the system. This record could be implemented in any way that would allow the who, what, why and when of a request and export to be recoverable for review. The system has the capability of providing a report or accounting of disclosures by patient that meets in accordance with scope of practice, organizational policy, and jurisdictional law.			
1.	The system SHALL provide the ability to render reports consisting of all and part of an individual patient's record according to scope of practice, organizational policy, and/or jurisdictional law.	CPS.9.3	NC	EN
2.	The system SHOULD provide the ability to capture and maintain the records or reports that are considered the formal health record for disclosure purposes.	CPS.9.3	NC	EN
3.	The system SHOULD provide the ability to render reports in both chronological and specified record elements order.	CPS.9.3	NC	EN
4.	The system SHOULD provide the ability to maintain and render hardcopy and electronic report summary information (e.g., developmental screening, demographics, procedures, medications, labs, immunizations, allergies, vital signs).	CPS.9.3	C	EN
6.	The system SHALL provide the ability to render patient identifying information on each page of reports (i.e., hard copy and electronic) according to organizational policy, and/or jurisdictional law.	CPS.9.3	NC	EN
9.	The system SHALL provide the ability to manage-data-visibility of data elements or portions of a report to prevent a given recipient from seeing certain data according to organizational policy and/or jurisdictional law (e.g., by hiding, redacting, removing from view, and/or removing from output).	CPS.9.3	NC	EN
15.	The system SHOULD provide the ability to render a record summary using the format specified by an organization to which a patient is transferred.	CPS.9.3	NC	EN
CPS.9.4 Function	Standard Report Generation	CPS.9.4	NC	EN
	Statement: Provide report generation features using tools internal or external to the system, for the generation of standard reports. **Description:** Providers and administrators need access to data in the EHR-S for clinical, administrative, financial decision-making, audit trail and metadata reporting, as well as to create reports for patients. Many systems may use internal or external reporting tools to accomplish this. Reports may be based on structured data, and/or unstructured text from the patient's health record. Users need to be able to sort, and/or filter reports. For example: -the user may wish to view only the diabetic patients on a report listing patients and diagnoses-the user may wish to view only male patients over 35 with a complaint of chest pain.			
1.	The system SHOULD provide the ability to render reports of structured clinical and administrative data using either internal or external reporting tools.	CPS.9.4	NC	EN
3.	The system SHOULD provide the ability to extract and transmit reports generated.	CPS.9.4	NC	EN
4.	The system SHOULD 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.	CPS.9.4	NC	EN
5.	The system MAY provide the ability to save report parameters for generating subsequent reports either as integrated component of the system, or an external application, using data from the system.	CPS.9.4	NC	EN
7.	The system SHOULD provide the ability to render automated reports as required by industry and regulatory bodies.	CPS.9.4	NC	EN
8.	The system SHOULD provide the ability to extract facility level data at an organizational level in support of organizational initiatives.	CPS.9.4	NC	EN
9.	The system MAY provide the ability to render a cumulative directory of all personnel who use or access the data.	CPS.9.4	NC	EN
CPS.10 Function	Manage User Help	CPS.10	NC	EN
	Statement: Support the ability to manage the configuration, and/or customization of appropriate user help that is context sensitive and may include the exchange of live online chat. **Description:** Throughout the system it is necessary to provide configurable, context sensitive, and/or searchable user help to assist in the use of the system. User help levels should be configurable based on user requirements, scope of practice, organizational policy, and/or jurisdictional law. User Help may include the live online chat support.			
1.	The system SHOULD provide the ability to manage the configuration and customization of User Help in accordance with user requirements, and according to scope of practice, organizational policy, and/or jurisdictional law.	CPS.10	NC	EN

Section/Id#: Type:	**Header/Function Name** **Conformance Criteria**	Reference	Chg Ind	Priority
2.	The system SHOULD receive queries and render responses for data entry and system navigation assistance (User Help).	CPS.10	NC	EN
4.	The system SHOULD render context-sensitive invokable help to guide users through activities in the system (e.g., charting steps, menu navigation).	CPS.10	NC	EN

4. Population Health Support Section

Section Overview

The Population Health Support Section focuses on those functions required of the EHR to support the prevention and control of disease among a group of people (as opposed to the direct care of a single patient), usually with something(s) in common, e.g., reside in the U.S., have diabetes, are under the age of 5, are treated by the same care provider, have pneumonia and are in a long-term care facility, etc. This section includes functions to support input to systems that perform medical research, promote public health, & improve the quality of care at a multi-patient level. Population health data must be managed carefully to avoid inadvertently breaching patient privacy and confidentiality. Individual patients may be identifiable within a population or aggregate based on information other than patient identifiers, e.g., age plus location, and/or based on a combination of public and population-based information. This section specifically addresses requirements related to patient privacy and consent for use of patient information for secondary uses, and/or reporting. All functions within the Population Health Support Section have an identifier starting with “POP”.

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
POP.1 Header	Support for Health Maintenance, Preventative Care and Wellness	POP.1	C	EN
	Statement: Evaluate patient information to provide alerts, notifications and reminders regarding health, preventative care and wellness. **Description:** The system assists in determining ongoing and pertinent communications from the provider to a child’s caregiver to promote healthy child development.			
POP.1.1 Function	Present Alerts for Preventative Services and Wellness	POP.1.1	C	EN
	Statement: Identify child-specific suggestions/reminders, screening tests/exams, and other preventative services in support of routine developmental care **Description:** At the time of an encounter, the provider or child’s caregiver is presented with due or overdue activities based on protocols for supporting child development. Examples include well child care and developmental screening exams.			
1.	The system SHALL provide the ability to manage criteria for disease management, wellness, and preventative services based on patient demographic data (minimally age and gender).	POP.1.1	NC	EN
2.	The system SHOULD provide the ability to capture and maintain the rules or parameters upon which guideline-related alerts are based.	POP.1.1	NC	EN
3.	The system SHOULD provide the ability to manage clinical decision support criteria for disease management, wellness, and preventative services based on clinical data (e.g., problem/diagnosis list or current medications).	POP.1.1	NC	EN
4.	The system SHALL provide the ability to render alerts based on recognized-standard guidelines, and/or locally-defined standard guidelines.	POP.1.1	NC	EN
5.	The system SHOULD provide the ability to render a list of all alerts along with the scheduled date and time for the preventative care and wellness.	POP.1.1	NC	EN
6.	The system SHOULD provide the ability to render a history of all alerts that were generated for the patient in the record.	POP.1.1	C	EN
7.	The system SHALL provide the ability to capture and maintain reasons disease management or preventative services/wellness prompts were overridden.	POP.1.1	C	EN
8.	The system SHALL provide the ability to capture and maintain documentation that a preventative or disease management service has been performed based on activities documented in the record (e.g., vitals signs taken).	POP.1.1	C	EN
9.	The system SHALL 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.	POP.1.1	C	EN
10.	The system SHALL provide the ability to capture, maintain and render alerts to individual patients regarding their specific clinical situation.	POP.1.1	C	EN
11.	The system SHALL determine when the patient's monitored health parameters have exceeded threshold values according to scope of practice, and/or organizational policy, and transmit an alert to a patient's provider or to the patient's care team.	POP.1.1	C	EN
13.	If the child is in an eligible age (9,18, 24, or 30 months +- 3 months), the system SHOULD provide the ability to present to the healthcare provider or identified staff that the child needs a developmental screener prior to the well child visit.		N	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
POP.1.2 Function	Present Notifications and Reminders for Preventative Services and Wellness	POP.1.2	C	EN
	Statement: Evaluate and notify patient, and/or provider of those preventative services, tests, or behavioral actions that are due or overdue. **Description:** The system generates notifications to a child's caregiver regarding activities that are due or overdue. Examples include but are not limited to time sensitive caregiver and provider notification of screening tests, follow-up appointments, and referral follow-up. The notifications can be customized in terms of timing, repetitions and administration reports. For example, a screening test might be sent to a child's caregiver one week prior to the 9-month, 18-month, or 30-month well-child visit.			
	1. The system SHALL capture, maintain, and render timely notifications to patients, and/or appropriate providers of preventative services, tests or behavioral actions that are due or overdue on an individual patient.	POP.1.2	NC	EN
	2. The system SHALL capture in the patient's record a history of preventative service and wellness related system notifications regarding that patient.	POP.1.2	C	EN
	3. The system SHALL provide the ability to determine and present overdue preventative services.	POP.1.2	C	EN
	4. The system MAY 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).	POP.1.2	NC	EN
	5. The system SHALL provide the ability to update content of preventative service and wellness related notifications, guidelines, reminders and associated reference materials.	POP.1.2	C	EN
	6. The system SHALL provide the ability to manage the guidelines, criteria or rules that trigger the preventative service and wellness related notifications.	POP.1.2	C	EN
	7. The system MAY 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).	POP.1.2	NC	EN
	8. The system MAY provide the ability to capture and maintain the documentation of manual outreach activities (e.g., e-mail, letter or associated telephone conversation).	POP.1.2	NC	EN
	9. The system MAY provide the ability to present to the caregiver that the child is due for screening. For example, the EMR can use the recorded email of the caregiver or communicate via the patient's portal or notify the caregiver at the time of arrival at health care center.		N	EN
POP.2 Header	Support Population-Based Epidemiological Investigation/Surveillance	POP.2	C	EN
	Statement: Support for population-based internal and external epidemiological investigations of child development activities of aggregate child data for use in identifying children at risk for developmental delays and disabilities. **Description:** A care provider, public health expert, or organization may wish to analyze data from cohorts,(i.e., subpopulations defined by certain characteristics or conditions).			

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
POP.2.1 Function	Support for Epidemiological Investigation/ Surveillance Data Collection	POP.2.1	C	EN

Statement: Support for Person-Level and Aggregate-Level Queries to Generate Population Cohorts, and/or Aggregates to be used in epidemiologic investigations and reports.

Description: Population health analysts (investigators) examine health data for trends and conditions through the use of well-defined queries to create their data sets. Preparing such well-defined queries, i.e., selection criteria and parameters, used to generate a cohort can be a complex and iterative process. The investigator may desire to use pre-defined or self-constructed queries (which may be saved for reuse). During the process of defining a query, the investigator may desire to accumulate statistics regarding the results of interim queries (e.g., number of patients in the query result) to determine the suitability of the queries, and subsequently modify the final query.

The investigator maintains sets of queries by constructing names that depict the cohorts, the fields comprising the queries and, perhaps, values for those fields. The resultant data set generated should be validated against the intended purpose of the query. Queries may need to be saved to support future analysis of the same (or a similar) cohort. For example, the investigator may construct an "children with screening results of no concern" query that is used to identify children with screening results of “No Concern” where it was indicated that follow-up was needed, then also construct an “children with screening results of concern” query by modifying a copy of the first one. Queries may identify “static” or “dynamic” cohorts. A “static cohort” query identifies and monitors certain patients within a given cohort over time.

A “dynamic cohort” query may identify new patients to be added periodically to a cohort. Information compiled by using a query may need to be governed by applicable policies and regulations. For example, psychiatric data may need to be excluded from a given epidemiological investigation. The query may need to specify that subjects are de-identified or aggregates are created according to the requirements of the analysis or privacy restrictions. For example, queries may be made of de-identified aggregate subjects to evaluate organizational quality metrics quickly and securely. Data aggregation may be used to de-identify subjects, to condense the cohort, or to sub-divide a given cohort into various "aggregates" (for example, by age range, geographic location, or socio-economic level), depicting the quantity of records, and/or content within each aggregate. Aggregate data may need to be integrated or linked d within or across cohorts. The criteria for data aggregation also may be applied to different cohorts.

A “dynamic cohort” query may identify new patients to be added periodically to a cohort (e.g., the number of pregnant patients who arrived in the Emergency Department during each month). Information compiled by using a query may need to be governed by applicable policies and regulations. For example, psychiatric data may need to be excluded from a given epidemiological investigation. The query may need to specify that subjects are de-identified or aggregates are created according to the requirements of the analysis or privacy restrictions. For example, queries may be made of de-identified aggregate subjects to evaluate possible medical products safety issues quickly and securely. Data aggregation may be used to de-identify subjects, to condense the cohort, or to sub-divide a given cohort into various "aggregates" (for example, by age range, geographic location, socio-economic level, or education level), depicting the quantity of records, and/or content within each aggregate. Aggregate data may need to be integrated or linked d within or across cohorts. The criteria for data aggregation also may be applied to different cohorts.

1. The system SHALL 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 scope of practice, organizational policy, and/or jurisdictional law.	POP.2.1	NC	EN
2. The system SHALL 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.	POP.2.1	NC	EN
3. The system SHALL 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	POP.2.1	NC	EN
4. The system SHALL 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).	POP.2.1	NC	EN
5. The system SHALL provide the ability to maintain new cohort or cohorts.	POP.2.1	NC	EN
6. The system SHOULD provide the ability to integrate previously-defined cohorts.	POP.2.1	NC	EN
7. The system SHOULD provide the ability to integrate previously-defined aggregates within a cohort, and/or across cohorts and maintain the new aggregate or aggregates.	POP.2.1	NC	EN
8. The system SHALL provide the ability to manage data-visibility as a query component according to scope of practice, organizational policy, and/or jurisdictional law	POP.2.1	NC	EN
9. The system SHOULD 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 scope of practice, organizational policy, and/or jurisdictional law.	POP.2.1	NC	EN
10. The system SHOULD conform to function TI.5.3 (Standards-Based Application Integration) to suppport the creation of a query.	POP.2.1	NC	EN
11. The system SHALL provide the ability to manage ad hoc inquiries from public health organizations (e.g., requests for information related to demographic or clinical information) according to scope of practice, organizational policy, and/or jurisdictional law.	POP.2.1	NC	EN
12. The system SHALL provide the ability to manage case-reporting requirements defined by public health organizations as queries according to scope of practice, organizational policy, and/or jurisdictional law.	POP.2.1	NC	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
POP.4 Function	Support for Monitoring Response Notifications Regarding a Specific Child's Health and Development	POP.4	C	EN
	Statement: In the event of a health risk alert, evaluate whether expected actions have been taken, and execute follow-up notification otherwise. **Description:** The system assists in follow-up for a specific patient event that has failed to occur (e.g., absence of results for a recommended screening test) and communicate the omission to the appropriate care provider(s).			
1.	The system SHALL determine and render to the provider specific recommended actions that may be taken at the patient level regarding a health risk alert.	POP.4	NC	EN
2.	The system SHALL 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.	POP.4	NC	EN
3.	The system SHALL determine and render a list of those patients who have not received appropriate action in response to a health risk alert.	POP.4	NC	EN
4.	The system SHALL 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.	POP.4	NC	EN
POP.6 Header	Measurement, Analysis, Research and Reports	POP.6	NC	EN
	Statement: Support the capture and subsequent export or retrieval of data necessary for the measurement, analysis, research and reporting. **Description:** Information from the EHR-S may be used to support measurement, analysis, research and reporting to improve the provision of care. Reporting may include: - reporting on patient outcome of care by population, facility, provider or community; - providing quality, performance, and accountability measurements for which providers, facilities, delivery systems, and communities are held accountable; - support process improvement measures and related initiatives; and- support health care organizational performance monitoring and improvement.			
POP.6.1 Function	Outcome Measures and Analysis	POP.6.1	C	EN
	Statement: Support the capture and subsequent export or retrieval of data necessary for the reporting on patient outcome of care by population, facility, provider or community. **Description:** Many regions require regular reporting on the healthcare provided to individuals and populations. The system needs to provide the report-generating capability to easily create these reports or provide for the export of data to external report-generating software. The system may also provide the functionality to prompt for the collection of necessary information at the appropriate time in a patient encounter if such collection need can be properly defined in a workflow (e.g., requesting specific information on developmental risk factors or for the collection of additional research data).			
1.	The system SHOULD provide the ability to render data required to evaluate patient outcomes.	POP.6.1	NC	EN
2.	The system SHOULD 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.	POP.6.1	NC	EN
3.	The system SHOULD provide the ability to capture and maintain outcome measures for a specific patient, and/or groups of patients with a specific diagnosis.	POP.6.1	NC	EN
4.	The system SHOULD provide the ability to capture and maintain measures to evaluate patient, and/or population outcomes to meet various regional requirements.	POP.6.1	NC	EN
5.	The system SHOULD provide the ability to capture and render unique patient and/or population outcome data defined to meet regional requirements.	POP.6.1	NC	EN
6.	The system SHOULD provide the ability to capture, maintain and render report formats for the export of patient, and/or population outcome data.	POP.6.1	NC	EN
7.	The system SHOULD 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.	POP.6.1	NC	EN
8.	The system SHOULD render patient, and/or population outcome data or query results to appropriate organizations (e.g., Quality Measurement organizations, Accreditation organizations) through a secure data service.	POP.6.1	NC	EN
9.	The system SHALL 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).	POP.6.1	NC	EN
10.	IF the system provides the ability to tag patients who have been identified as exempt from being included on certain population-based reports, THEN the system SHALL provide the ability to manage-data-visibility for those patients.	POP.6.1	NC	EN
11.	The system SHALL provide the ability to render children with both a response of "no concern" AND a "yes" response for follow-up needed.		N	EN
12.	The system SHALL provide the ability to render children with both a response "of concern" AND a "yes" response for follow-up needed.		N	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
13. The system SHALL provide the ability to render children with a response "of concern".			N	EN
14. The system SHALL provide the ability to render children with a "yes" response to completed screening.			N	EN
15. The system SHALL provide the ability to capture for each child whether they should be counted in a denominator based on screening eligibility and age: - Denominator 1: The children in the eligible population who turned 1 during the measurement year. - Denominator 2: The children in the eligible population who turned 2 during the measurement year. - Denominator 3: The children in the eligible population who turned 3 during the measurement year. - Denominator 4: All children in the eligible population who turned 1, 2, or 3 during the measurement year, i.e., the sum of denominators 1, 2, and 3.			N	EN
POP.6.2 Function	Quality, Performance and Accountability Measures	POP.6.2	NC	EN
Statement: Support the capture and subsequent export or retrieval of patient, and/or population data necessary to provide quality, performance, and accountability measurements for which providers, facilities, delivery systems, and communities are held accountable. **Description:** Many regions require regular reporting on the healthcare provided to individuals and populations. This reporting may include measures related to or addressing processes, outcomes, costs of care, quality of care, adherence to best practice guidelines, and credentialing and privileging monitoring. The system needs to provide the report-generating capability to easily create these reports or provide for the export of data to external report-generating software.				
1. The system SHOULD provide the ability to render patient, and/or population data required to assess health quality, performance and accountability measures to appropriate organizations.		POP.6.2	NC	EN
2. The system SHOULD 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 counseled to take folic acid).		POP.6.2	NC	EN
3. The system SHOULD 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.		POP.6.2	NC	EN
4. The system SHOULD render patient, and/or population health care quality, performance and accountability measures data or query results through a secure data service.		POP.6.2	NC	EN
5. The system SHOULD 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 scope of practice, organizational policy, and/or jurisdictional law.		POP.6.2	NC	EN
6. The system MAY 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 scope of practice, organizational policy, and/or jurisdictional law.		POP.6.2	NC	EN

5. Administration Support Section

Section Overview

The Administrative Support Section focusses on functions required in the EHR-S to support the management of the clinical practice and to assist with the administrative and financial operations. This includes management of resources, workflow and communication with patients and providers as well as the management of non-clinical administrative information on patients and providers. All functions within the Administrative Support Section have an identifier starting with “AS”.

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
AS.5 Header	Manage Clinical Workflow Tasking	AS.5	C	EN

Statement: Create, schedule, update and manage tasks with appropriate timeliness.

Description: Since an electronic health record will replace the paper chart or other paper-based system, tasks that were based on the paper artifact must be effectively managed in the electronic environment. Functions must exist in the EHR-S that support electronically any workflow that previously depended on the existence of a physical artifact (such as the paper chart, a phone message slip) in a paper based system. Tasks differ from other more generic communication among participants in the care process because they are a call to action and target completion of a specific workflow in the context of a patient's health record (including a specific component of the record). Tasks also require disposition (final resolution). The initiator may optionally require a response.

For example, in a paper based system, developmental screening tests may need to be distributed in the waiting room, completed, scored, and then handed to a clinician for review. This queue of tasks must be supported electronically so that the list is visible to the appropriate user or role for disposition. The state transition (e.g., distributed, completed, scored) may be managed by the user explicitly or automatically based on rules. For example, if a user has a task to score a screening test, that task should automatically be marked complete by the EHR when a screening result is entered into the system. Caregivers will become more involved in the care process by receiving tasks related to their child’s care.

AS.5.1 Function	Clinical Task Creation, Assignment and Routing	AS.5.1	NC	EN

Statement: Creation, assignment, delegation, and/or transmission of tasks to the appropriate parties.

Description: A "Task" is a specific piece of work or duty that is assigned to a person or entity. A task often needs to be accomplished within a defined period of time or by a deadline. Tasks are often managed by an activity (or project) tracking mechanism (e.g., as part of an automated business rule process). Tasks are determined by the specific needs of patients and practitioners in a care setting. Task creation may be automated, where appropriate. An example of a system-triggered task is when laboratory results are received electronically; a task to review the result is automatically generated and assigned to a responsible party. Tasks are at all times assigned to at least one user or role for disposition. Whether the task is assignable and to whom the task can be assigned will be determined by the specific needs of practitioners in a care setting.

Task-assignment lists help users prioritize and complete assigned tasks. For example, after receiving communication (e.g., a phone call or e-mail) from a patient, the triage nurse routes or assigns a task to return the patient's call to the physician who is on call physician. Another example is for a urinalysis, the nurse routes or assigns a task to clinical staff to collect a urine specimen, and for the results to be routed to the responsible physician and person ordering the test. Task creation and assignment may be automated, where appropriate. An example is when (International Normalized Ratio) INR results are received they should be automatically routed and assigned to the staff person in the clinic responsible for managing all of the patients that are having INR tests done. Task assignment ensures that all tasks are disposed of by the appropriate person or role and allows efficient interaction of entities in the care process. When a task is assigned to more than one individual or role, an indication is required to show whether the task must be completed by all individuals/ roles or if only one completion suffice.

1. The system SHALL provide the ability to capture new tasks.	AS.5.1	NC	EN
2. The system SHOULD provide the ability to auto-populate task information based on rules, patient information, triggering events, and/or resource factors.	AS.5.1	NC	EN
3. The system SHALL provide the ability for the user to enter and update an assignment for a task to one or more individuals or roles.	AS.5.1	NC	EN
4. The system SHOULD 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).	AS.5.1	NC	EN
5. The system SHALL provide the ability to determine and update an assignment for a task to one or more individuals or clinical roles, based on workflow rules.	AS.5.1	NC	EN
6. The system SHOULD provide the ability to determine workflow task routing to individuals or roles in succession or in parallel.	AS.5.1	NC	EN
7. The system SHOULD provide the ability to determine workflow task routing to multiple individuals or roles in succession or in parallel based on status and workflow rules.	AS.5.1	NC	EN
8. The system SHOULD provide the ability to capture and update priorities for tasks.	AS.5.1	NC	EN
9. The system SHOULD provide the ability to determine and update priorities for tasks (e.g., based on urgency assigned to the task, clinical rules and business rules).	AS.5.1	NC	EN
10. The system SHOULD provide the ability to capture restrictions for task assignment based on an appropriate role according to organizational policy.	AS.5.1	NC	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
11.	The system SHOULD determine restrictions for task assignment based on appropriate role according to organizational policy.	AS.5.1	NC	EN
12.	The system SHALL provide the ability to update the priorities of clinical tasks (e.g., to ensure timely completion).	AS.5.1	NC	EN
13.	The system SHOULD determine and update the priorities of clinical tasks according to organizational policy (e.g., to ensure timely completion).	AS.5.1	NC	EN
14.	The system SHOULD 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).	AS.5.1	NC	EN
15.	The system SHOULD provide the ability to render a list of tasks by user or user role according to user specified criteria.	AS.5.1	NC	EN
16.	The system SHOULD provide the ability to determine time periods and recipients for notification of overdue medication administrations.	AS.5.1	NC	EN
17.	The system SHOULD provide the ability to render a notification to the clinician of overdue medication administrations.	AS.5.1	NC	EN
18.	The system SHOULD provide the ability to determine time periods for order expiration for types of orders.	AS.5.1	NC	EN
19.	The system SHOULD provide the ability to render a notification to the ordering clinician concerning orders due to expire.	AS.5.1	NC	EN
20.	The system SHOULD provide the ability to render a notification to the ordering clinician concerning orders requiring signature (e.g., verbal and telephone orders, co-signature).	AS.5.1	NC	EN
21.	The system SHOULD 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 scope of practice, organizational policy, and/or jurisdictional law.	AS.5.1	NC	EN
22.	The system SHOULD provide the ability to capture, maintain, and render information regarding the reassignment of a single task or group of tasks to available roles when the primary role that was selected is not available.	AS.5.1	NC	EN
23.	IF the system determines that applicable tasks and pre-conditions expected have not been performed, THEN the system SHOULD transmit a notification to a patient's provider or to the patient's care team according to scope of practice, organizational policy, and/or jurisdictional law.	AS.5.1	NC	EN
AS.5.3 Function	Clinical Task Linking	AS.5.3	NC	EN
	Statement: Linkage of tasks to EHR components, patients, and/or a relevant part of the electronic health record. **Description:** Clinical tasks must include information or provide an electronic link to information that is required to complete the task. There is a need to create the appropriate links and, then, to have the system automatically present the information that was linked. For example, this may include a patient location in a facility, a patient's, and/or family's contact information, or a link to new laboratory results in the patient's EHR. Other example: the linkage of prescription task to the appropriate patient care plan to facilitate follow-up actions; a task to take weights links to the "Weights and Vitals" screen to record the result; a task to complete a fall assessment links to the fall assessment form to be completed. An example of a well-defined task is "Dr. Jones must review Mr. Smith's blood work results." Efficient workflow is facilitated by navigating to the appropriate area of the record to ensure that the appropriate test result for the correct patient is reviewed.			
1.	The system SHALL provide the ability to link a clinical task to the component of the EHR system required to complete the task (e.g., link a clinical task regarding a surgical procedure to an assessment template that will help the provider to collect laceration information regarding a patient's stab wound).	AS.5.3	NC	EN
2.	The system MAY present automatically the component of the system required to complete a clinical task (e.g., offering a provider with an assessment template that will help collect laceration information regarding a patient's stab wound).	AS.5.3	NC	EN
3.	The system SHOULD provide the ability to link a non-clinical task to a clinical task.	AS.5.3	NC	EN
4.	The system SHALL provide the ability to link a clinical task to a patient.	AS.5.3	NC	EN
AS.5.4 Function	Clinical Task Status Tracking	AS.5.4	C	EN
	Statement: Track tasks to facilitate monitoring for timely and appropriate completion of each task. **Description:** In order to reduce the risk of errors during the care process due to missed tasks, the provider is able to view the status of each task (e.g., unassigned, on hold, started, performed, canceled, denied, and resolved) and current work lists, lists of unassigned tasks or undisposed tasks, or of other tasks where a risk of omission exists. The timeliness of certain tasks can be tracked, or reports generated, in accordance with relevant law and accreditation standards. For example, a provider is able to create a report that shows whether caregivers have contacted early intervention services after a referral is made.			
1.	The system SHALL provide the ability to update the status of tasks.	AS.5.4	NC	EN
2.	The system SHOULD provide the ability to determine and update the status of tasks based on workflow and clinical rules and according to scope of practice, organizational policy, and/or jurisdictional law.	AS.5.4	NC	EN
3.	The system SHALL provide the ability to render notices of the status of tasks to providers.	AS.5.4	NC	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
4.	The system MAY provide the ability to capture subscription preferences for notices of changes in the status of tasks.	AS.5.4	NC	EN
5.	The system SHALL provide the ability to determine the order of clinical tasks based on status.	AS.5.4	NC	EN
6.	The system SHOULD provide the ability to present current clinical tasks as work lists.	AS.5.4	NC	EN
7.	The system SHOULD provide the ability to enter configuration parameters for filtering and rendering of clinical task lists.	AS.5.4	NC	EN
8.	The system SHOULD provide the ability to render clinical task lists based on configuration entered by the user.	AS.5.4	NC	EN
9.	The system MAY render a notification to the tasking or requesting provider when clinical tasks are complete.	AS.5.4	NC	EN
10.	The system SHOULD provide the ability to enter time limits on particular tasks that have a deadline or require follow-up.	AS.5.4	NC	EN
11.	The system SHOULD provide the ability to determine when time limits for particular tasks are exceeded.	AS.5.4	NC	EN
12.	IF the system provides the ability to determine when time limits for a particular task are exceeded;, THEN the system SHALL provide the ability to render a list of these tasks.	AS.5.4	NC	EN
13.	The system SHOULD render a list of tasks that have not been completed at any time including the time of patient disposition.	AS.5.4	NC	EN
14.	The system SHALL provide the ability to update task status (e.g., unassigned, on hold, started, performed, canceled, denied, and resolved).	AS.5.4	NC	EN
15.	The system SHOULD determine and update the status of tasks based on workflow rules.	AS.5.4	NC	EN
16.	The system SHALL provide the ability to determine and update the status of the screening of the child ("Yes" if completed and "No" if not completed).		N	EN
AS.6 Header	Manage Resource Availability	AS.6	NC	EN

Statement: Manage the availability of healthcare resources to support the provision of care.

Description: Resources may include human resources (e.g., providers, support personnel) as well as physical resources (e.g., facilities, transportation, equipment, supplies). Managing resources includes managing the availability of necessary resources to support the provision of care including resource scheduling and managing information about the resources (e.g., availability, capabilities). The management of resources may also include supporting triage categorization, waiting rooms and patient acuity and severity determination.

AS.6.2 Function	Manage Healthcare Resource Availability Information	AS.6.2	NC	EN
1.	The system MAY 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 theaters, medical supplies, vaccines, and pharmaceuticals) according to scope of practice, organizational policy, and/or jurisdictional law.	AS.6.2	NC	EN
AS.9 Header	Manage Administrative Transaction Processing	AS.9	NC	EN

Statement: Support the creation (including using external data sources, if necessary), electronic interchange, and processing of transactions listed below that may be necessary foradministrative management during an episode of care.

Description: Support the creation (including using external data sources, if necessary), electronic interchange, and processing of transactions listed below that may be necessary for administrative management during an episode of care.

The EHR system collects patient health-related information needed for purpose of administrative and financial activities including reimbursement.

Captures the episode and encounter information to pass to administrative or financial processes (e.g., triggers transmissions of charge transactions as by-product of on-line interaction including order entry, order statusing, result entry, documentation entry, medication administration charting).Automatically retrieves information needed to verify coverage and medical necessity. As a byproduct of care delivery and documentation captures and presents all patient information needed to support coding. Ideally performs coding based on documentation.

Clinically automated revenue cycle - examples of reduced denials and error rates in claims.

Clinical information needed for billing is available on the date of service.

Physician and clinical teams do not perform additional data entry / tasks exclusively to support administrative or financial processes.

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
AS.9.2 Function	Support Financial Eligibility Verification	AS.9.2	NC	EN
	Statement: Support interactions with other systems, applications, and modules to enable eligibility verification for health insurance and special programs, including verification of benefits and pre-determination of coverage. **Description:** Retrieves information needed to support verification of coverage at the appropriate juncture in the encounter workflow. Improves patient access to covered care and reduces claim denials. When eligibility is verified, the system could prompt a provider to capture eligibility information needed for processing administrative and financial documentation, reports or transactions; updating or flagging any inconsistent data. In addition to health insurance eligibility, this function would support verification of registration in programs and registries, such as chronic care case management and immunization registries. A system would likely verify health insurance eligibility prior to the encounter, but would verify registration in case management or immunization registries during the encounter.			
	1. The system SHOULD provide the ability to capture patient health plan eligibility information for date(s) of service.	AS.9.2	NC	EN
	2. IF the system does not provide the ability to exchange electronic eligibility information (e.g., health plan coverage dates) with internal and external systems, THEN the system SHALL provide the ability to enter and maintain patient health plan coverage dates.	AS.9.2	NC	EN
	3. The system MAY provide the ability to capture general benefit coverage information for patients.	AS.9.2	NC	EN
	4. 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.	AS.9.2	NC	EN
	5. The system MAY provide the ability to capture electronic eligibility information from internal and external systems.	AS.9.2	NC	EN
	6. The system MAY provide the ability to render information received through electronic prescription eligibility checking.	AS.9.2	NC	EN
	7. The system MAY provide the ability to capture and maintain patient registration in special programs (e.g., registries and case management).	AS.9.2	NC	EN
	8. The system MAY provide the ability to analyze eligibility and coverage information for inconsistencies (e.g., coverage dates, patient identity data, coverage status), and render a notification to the user regarding identified inconsistencies.	AS.9.2	NC	EN
	9. The system MAY provide the ability to render information received through provider eligibility checking.	AS.9.2	NC	EN
AS.9.3 Function	Support Service Authorizations	AS.9.3	NC	EN
	Statement: Support interactions with other systems, applications, and modules to enable the creation of requests, responses and appeals related to service authorization, including prior authorizations, referrals, and pre-certification. **Description:** Retrieves information needed to support verification of medical necessity and prior authorization of services at the appropriate juncture in the encounter workflow. Improves timeliness of patient care and reduces claim denials.			
	1. The system SHOULD provide the ability to capture service authorizations relevant to the service provided including the source, dates, and service(s) authorized.	AS.9.3	NC	EN
	2. The system SHOULD provide the ability to capture referrals relevant to the service provided including the source, date and service(s) referred.	AS.9.3	NC	EN
	3. The system MAY provide the ability to exchange computer readable data on service authorizations according to scope of practice, organizational policy, and/or jurisdictional law.	AS.9.3	NC	EN
	4. The system MAY provide the ability to exchange computer readable data on service referral information according to scope of practice, organizational policy, and/or jurisdictional law.	AS.9.3	NC	EN
	5. The system SHOULD provide the ability to export electronic referral(s), including relevant supporting clinical information from care providers internal or external to the organization.	AS.9.3	NC	EN
	6. The system MAY provide the ability to export electronic referral(s), including relevant supporting administrative information from care providers internal or external to the organization.	AS.9.3	NC	EN

6. Record Infrastructure Section

Section Overview

The Record Infrastructure Section consists of functions common to EHR System record management, particularly those functions foundational to managing record lifecycle (origination, attestation, amendment, access/use, translation, transmittal/ disclosure, receipt, de-identification, archive…) and record lifespan (persistence, indelibility, continuity, audit, encryption). RI functions are core and foundational to all other functions of the Model (CP, CPS, POP, AS). Note extensive reference to RI functions in Overarching Criteria. RI functions may be implemented within the architecture of a single system or across a tightly coupled suite of systems (applications).All functions within the Record Infrastructure Section have an identifier starting with “RI”.

Section/Id#: Type:	**Header/Function Name** **Conformance Criteria**	Reference	Chg Ind	Priority
RI.1 Header	Record Lifecycle and Lifespan	RI.1	NC	EN

Statement: Manage Record Lifecycle and Lifespan

Description: Actions are taken to support patient health. Actions are taken in provision of healthcare to individuals. Actions are taken as the result of rules-based EHR System algorithms. Actors (i.e., patients, providers, users, systems) take Actions. (Actions broadly encompass tasks, acts, procedures or services performed or provided.) The EHR System captures Actions taken and creates corresponding Record Entries. Record Entries provide persistent evidence of Action occurrence, context, disposition, facts, findings and observations. From the point of Record Entry origination to the end of its lifespan, the EHR System manages each Entry consistent with and according to scope of practice, organizational policy, and jurisdictional law. In support of individual health and in provision of healthcare to individuals, Actors perform Actions and Actions have corresponding Entries in the EHR Record, (i.e., Action instances are documented by Record Entry instances). Record Entries may be captured during the course of the Action or sometime thereafter. The Actor (author/source) of the Record Entry may be the same as an Actor performing the Action or not. The EHRS Functional Model does not specify a particular relationship of Actions and corresponding Record Entries. It may be one to one, many to one or even one to many. Actions have associated metadata (e.g., who, what, when, where, why, how, under what conditions, in what context). The corresponding Record Entry captures this metadata along with other Action and Record Entry related information.

Each Record Entry also includes its own provenance metadata such as who (authoring Actor) and when (documented). Record Entries may be encapsulated to bind Actor (individual, organization, and/or system) signatures to data and metadata content and data/time of occurrence. Actions and related Record Entries capture a chronology of patient health and healthcare and also a chronology of operations and services provided in/by a healthcare enterprise. Record Entries reflect changes in health information from the time it was created, to the time it was amended, sent, received, etc. In this manner, each Record Entry serves as persistent evidence of an Action taken, enabling providers to maintain comprehensive information that may be needed for legal, business, and disclosure purposes. To satisfy these purposes, Record Entries must also be retained and persisted without alteration. Record Entries have both a lifecycle and a lifespan. Lifecycle Events include originate, retain, amend, verify, attest, access/view, de-identify, transmit/receive, and more. Lifecycle Events occur at various points in a Record Entry lifespan, always starting with a point of origination and retention (i.e., when the Entry is first created and stored). A Record Entry may have a pre and post Event state if content is modified. In this case, the original Record Entry is preserved (with signature binding) and a new Entry is created (with new signature binding). A Record Entry contains data and metadata, in multiple formats, following various conventions and standards. Included data may be tagged, and/or delimited, structured (concise, encoded, computable), or unstructured (free form, non-computable). Data may be encoded as text, document, images, audio, waveforms, in ASCII, binary or other encoding. Structured data may be characterized as being concise, encoded, computable, and may be divided into discrete fields.

Examples of structured health information include:

- patient residence (non-codified, but discrete field)
- diastolic blood pressure (numeric)
- coded laboratory result or observation
- coded diagnosis
- patient risk assessment questionnaire with multiple-choice answers.

Unstructured data may be characterized as being free form, and/or non-computable. Unstructured health record information is information that is not divided into discrete fields AND not represented as numeric, enumerated or codified data.

Examples of unstructured health record information include:

- text (text message to physician) - word processing document (a letter from a family member) - image (photograph of a patient or a scanned image of insurance card) - multimedia (dictated report or a voice recording).

Context may determine whether data are structured or unstructured. For example, a progress note might be standardized and structured in some systems (e.g., Subjective/Objective/Assessment/Plan) but unstructured in other systems. The EHR System manages Record Lifecycle Events for each Record Entry, including pre and post Event record states, continuity, persistence and related Record Audit Logs.

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
RI.1.1 Function	Record Lifecycle	RI.1.1	NC	EN
	Statement: Manage Record Lifecycle **Description:** As aboveReferences: - ISO 21089: Health Informatics – Trusted End-to-End Information Flows- HL7 EHR Interoperability Model DSTU- HL7 Electronic Health Record Lifecycle Model DSTU			
1.	The system SHALL conform to function RI.1.2.1 (Manage Record Entries) as the final step to conclude each Record Lifecycle Event in RI.1.1 (Record Lifecycle) and all child functions.	RI.1.1	NC	EN
RI.1.1.1 Function	Originate and Retain Record Entry	RI.1.1.1	NC	EN
	Statement: Originate and Retain a Record Entry (1 instance) **Description:** Occurs when Record Entry is originated typically during the course of an Action itself, to document the Action and context. Record Entry is persistent evidence of Action occurrence and includes an identified Author or Source is responsible for Record Entry content. Record Entry contains Metadata about the Action and its circumstances, e.g., who, what, when, where, facts, findings, observations, etc. An Audit Trigger is initiated to track Record Entry origination and retention. Reference: ISO 21089, Section 12.2.2.			
1.	The system SHALL provide the ability to capture (originate) a Record Entry instance corresponding to an Action instance and context.	RI.1.1.1	NC	EN
2.	The system SHALL capture a unique instance identifier for each Record Entry.	RI.1.1.1	NC	EN
3.	The system SHALL capture the signature event (e.g., digital signature) of the origination entry Author, binding signature to Record Entry content.	RI.1.1.1	NC	EN
4.	The system SHALL provide the ability to capture both structured and unstructured content in Record Entries.	RI.1.1.1	NC	EN
5.	The system SHALL provide the ability to capture Record Entries from information recorded during system downtime.	RI.1.1.1	NC	EN
6.	The system SHOULD provide the ability to integrate Record Entries from Information recorded during system downtime.	RI.1.1.1	NC	EN
7.	The system SHALL 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.	RI.1.1.1	NC	EN
8.	The system SHOULD capture metadata that identifies the source of non-originated Record Entry (e.g., templated, copied, duplicated, or boilerplate information).	RI.1.1.1	NC	EN
9.	The system MAY provide the ability to tag unstructured Record Entry content to organize 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.	RI.1.1.1	NC	EN
10.	The system MAY capture and maintain a Record Entry encoded as a standards-based data object (e.g., HL7 Continuity of Care, other HL7 CDA R2 Document, ISO 13606 artifact).	RI.1.1.1	NC	EN
RI.1.1.1.1 Function	Evidence of Record Entry Originate/Retain Event	RI.1.1.1.1	NC	EN
	Statement: Maintain Evidence of Record Entry Originate/Retain Event **Description:** Evidence of Record Entry Originate/Retain Event includes key metadata, ensures health record integrity (and trust) and enables record audit.			
1.	The system SHALL audit each occurrence when a Record Entry is originated and retained.	RI.1.1.1.1	NC	EN
2.	The system SHALL capture identity of the organization where Record Entry content is originated.	RI.1.1.1.1	NC	EN
3.	The system SHALL capture identity of the patient who is subject of Record Entry content.	RI.1.1.1.1	NC	EN
4.	The system SHALL capture identity of the individual(s) who performed the Action documented in Record Entry content.	RI.1.1.1.1	NC	EN
5.	The system SHALL capture identity of the user who entered/authored Record Entry content.	RI.1.1.1.1	NC	EN
6.	The system SHALL capture identity of the system application which originated Record Entry content.	RI.1.1.1.1	NC	EN
7.	IF the source of Record Entry content is a device, THEN the system SHALL capture identity of the device.	RI.1.1.1.1	NC	EN
8.	The system SHALL capture the Action as evidenced by Record Entry content.	RI.1.1.1.1	NC	EN
9.	The system SHALL capture the type of Record Event trigger (i.e., originate/retain).	RI.1.1.1.1	NC	EN
10.	The system SHALL capture the date and time of Action occurrence as evidenced by Record Entry content.	RI.1.1.1.1	NC	EN
11.	The system SHALL capture the date and time Record Entry content is originated.	RI.1.1.1.1	NC	EN
17.	IF Record Entry content includes templates (boilerplate information) or copied (duplicated) information, THEN the system SHOULD capture the source of such content.	RI.1.1.1.1	NC	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
RI.1.1.2 Function	Amend Record Entry Content	RI.1.1.2	NC	EN
Statement: Amend content of a Record Entry (1 instance) **Description:** Occurs when Record Entry content is modified (from its original or previously retained state) – typically upon conclusion of an Action, to correct, update or complete content. - Amended Record Entry content is the responsibility of authorized amendment Author(s). - The amendment becomes part of the Act Record revision history, where the original content and any previous amendments are retained without alteration. - After amendment, the System is responsible for retention of the Record Entry and its revision history. - An Audit Trigger is initiated to track Record Entry amendment. Reference: ISO 21089, Section 12.3.2			
1. The system SHALL provide the ability to update (amend) Record Entry content.		RI.1.1.2	NC	EN
2. The system SHALL maintain the original and all previously amended versions of the Record Entry, retaining each version instance without alteration.		RI.1.1.2	NC	EN
3. The system SHALL capture a new uniquely identifiable version of the Record Entry, incorporating amended content.		RI.1.1.2	NC	EN
4. The system SHALL capture the signature event (e.g., digital signature) of the amendment Author, binding signature to Record Entry content.		RI.1.1.2	NC	EN
RI.1.1.2.1 Function	Evidence of Record Entry Amendment Event	RI.1.1.2.1	NC	EN
Statement: Maintain Evidence of Record Entry Amendment Event **Description:** Evidence of Record Entry Amendment Event includes key metadata, ensures health record integrity (and trust) and enables record audit.				
1. The system SHALL audit each occurrence when a Record Entry is amended.		RI.1.1.2.1	NC	EN
2. The system SHALL capture identity of the organization where Record Entry content is amended.		RI.1.1.2.1	NC	EN
3. The system SHALL capture identity of the patient who is subject of amended Record Entry content.		RI.1.1.2.1	NC	EN
4. The system SHALL capture identity of the user who entered/authored Record Entry content amendment.		RI.1.1.2.1	NC	EN
5. The system SHALL capture identity of the system application which amended Record Entry content.		RI.1.1.2.1	NC	EN
6. The system SHALL capture the type of Record Event trigger (i.e., amendment).		RI.1.1.2.1	NC	EN
7. The system SHALL capture the date and time Record Entry content is amended.		RI.1.1.2.1	NC	EN
10. The system SHALL capture a sequence identifier for amended Record Entry content.		RI.1.1.2.1	NC	EN
RI.1.1.3 Function	Translate Record Entry Content	RI.1.1.3	NC	EN
Statement: Translate content of Record Entries (1 or more instances) **Description:** Occurs when Record Entries are amended to include translation of content – typically to transform coded data from one coding/classification scheme to another, also from one human language to another. - Translated (amended) Record Entry content is the responsibility of translating System – which invokesmapping/translation rules for each relevant record attribute. - The translation amendment becomes part of the Record Entry revision history, where original content andany previous amendments are retained without alteration. - After translation amendment, the System is responsible for retention of the Record Entry and its revisionhistory (including the translation event). - An Audit Trigger is initiated to track Record Entry translation. Reference: ISO 21089, Sections 12.3.2 and 12.4.			
1. The system SHALL provide the ability to render coded Record Entry content translated from one coding/classification system to another.		RI.1.1.3	NC	EN
2. The system SHALL provide the ability to render coded Record Entry content translated from one value set to another.		RI.1.1.3	NC	EN
4. The system SHOULD maintain the original and all previously amended versions of the Record Entry, retaining each version instance without alteration.		RI.1.1.3	NC	EN
5. The system SHOULD capture a new uniquely identifiable version of the Record Entry, incorporating translated content.		RI.1.1.3	NC	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
RI.1.1.3.1 Function	Evidence of Record Entry Translate Event	RI.1.1.3.1	NC	EN
	Statement: Maintain Evidence of Record Entry Translate Event **Description:** Evidence of Record Entry Translate Event includes key metadata, ensures health record integrity (and trust) and enables record audit.			
1.	The system SHALL audit each occurrence when Record Entry content is translated.	RI.1.1.3.1	NC	EN
2.	The system SHALL capture identity of the organization where Record Entry content is translated.	RI.1.1.3.1	NC	EN
3.	The system SHALL capture identity of the patient who is subject of translated Record Entry content.	RI.1.1.3.1	NC	EN
4.	IF a user initiated a Record Entry content translation, THEN the system SHALL capture identity of the user initiating Record Entry content translation.	RI.1.1.3.1	NC	EN
5.	The system SHALL capture identity of the system application which translated Record Entry content.	RI.1.1.3.1	NC	EN
6.	The system SHALL capture the type of Record Event trigger (i.e., translation).	RI.1.1.3.1	NC	EN
7.	The system SHALL capture the date and time Record Entry content is translated.	RI.1.1.3.1	NC	EN
10.	The system SHALL capture a sequence identifier for translated Record Entry content.	RI.1.1.3.1	NC	EN
11.	The system SHALL capture the identifier and version of Translation Tools used for each translated Record Entry.	RI.1.1.3.1	NC	EN
12.	The system SHALL capture a reference (e.g., link, pointer) to pre-translation data for each Record Entry translation.	RI.1.1.3.1	NC	EN
RI.1.1.4 Function	Attest Record Entry Content	RI.1.1.4	NC	EN
	Statement: Attest to content of Record Entry (1 instance) **Description:** Occurs when Record Entry content is attested for accuracy and completeness – typically during/after conclusion of an Action. - 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 is initiated to track Record Entry attestation. The purpose of attestation is to show authorship and assign responsibility for an act, event, condition, opinion, or diagnosis. 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 should be identified. (Note: A transcriptionist may transcribe an author's notes and a senior clinician may attest to the accuracy of another's statement of events.)- 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. - Attester: 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) (e.g., student, scribe, transcriptionist).Reference: ISO 21089, Section 12.2.2.			
1.	The system SHALL conform to function TI.1.1 (Entity Authentication).	RI.1.1.4	NC	EN
2.	The system SHALL conform to function TI.1.2 (Entity Authorization).	RI.1.1.4	NC	EN
3.	The system SHALL provide the ability to attest (approve and apply signature to) Record Entry content by the author.	RI.1.1.4	NC	EN
4.	The system SHALL capture the signature event (e.g., digital signature) of the Attesting Author, binding signature to Record Entry content.	RI.1.1.4	NC	EN
5.	The system SHALL provide the ability to maintain any attestable Record Entry content added or changed with the content's author	RI.1.1.4	NC	EN
6.	The system SHALL present the status of attestable Record Entry content which has not been attested, conforming to function RI.1.3.1 (Record Pending State).	RI.1.1.4	NC	EN
7.	IF the attester is different than the author(s), THEN the system SHALL provide the ability to maintain Record Entry content by properly authenticated and authorized users different from the author (e.g., counter-signature) according to scope of practice, organizational policy, and/or jurisdictional law.	RI.1.1.4	NC	EN
8.	The system SHOULD provide the ability to manage digital signatures as the means for attestation.	RI.1.1.4	NC	EN
9.	IF more than one author contributed to the Record Entry content, THEN the system SHALL provide the ability to maintain all authors/contributors associated with their content.	RI.1.1.4	NC	EN
10.	IF Record Entry content is attested by someone other than the author, THEN the system SHALL maintain and display the author(s) and attester.	RI.1.1.4	NC	EN
11.	The system SHALL provide the ability to present a minimum set of information that identifies the author of Record Entry content according to scope of practice, organizational policy, and/or jurisdictional law (e.g., name, credential, and/or role (such as Karen Smith, RN)).	RI.1.1.4	NC	EN
12.	The system SHALL capture the signature type of the entity (individual, EHR or other system, or organization) sending Record Entry content.	RI.1.1.4	NC	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
13. The system SHALL capture the signature type of the entity (individual, EHR or other system, or organization) receiving Record Entry content.		RI.1.1.4	NC	EN
14. The system SHALL capture all signature types of the entities through which Record Entry content has passed.		RI.1.1.4	NC	EN
RI.1.1.4.1 Function	Evidence of Record Entry Attestation Event	RI.1.1.4.1	NC	EN
Statement: Maintain Evidence of Record Entry Attestation Event **Description:** Evidence of Record Entry Attestation Event includes key metadata, ensures health record integrity (and trust) and enables record audit.				
1. The system SHALL audit each occurrence of Record Entry attestation (signature event).		RI.1.1.4.1	NC	EN
2. The system SHALL capture identity of the organization where Record Entry content attestation (signature event) occurred.		RI.1.1.4.1	NC	EN
3. The system SHALL capture identity of the patient who is subject of attested Record Entry content.		RI.1.1.4.1	NC	EN
4. The system SHALL capture identity of the user attesting to Record Entry content (signature event).		RI.1.1.4.1	NC	EN
5. The system SHALL capture identity of the system application in which Record Entry content attestation (signature event) occurred.		RI.1.1.4.1	NC	EN
6. The system SHALL capture the type of Record Event trigger (i.e., attestation/signature event).		RI.1.1.4.1	NC	EN
7. The system SHALL capture the date and time of Record Entry content attestation (signature event).		RI.1.1.4.1	NC	EN
9. The system SHALL capture the data, document or other identifier for attested Record Entry content.		RI.1.1.4.1	NC	EN
RI.1.1.5 Function	View/Access Record Entry Content	RI.1.1.5	NC	EN
Statement: View/Access content of Record Entries (1 or more instances) **Description:** Occurs when Record Entry content is viewed or accessed. - Viewed Record Entry content is the responsibility of authorized User(s). - An Audit Trigger is initiated to track Record Entry views and access. Reference: ISO 21089, Section 12.5.				
2. The system SHALL provide the ability to render Record Entry content, including original version and any subsequent amendments.		RI.1.1.5	NC	EN
3. The system SHALL provide the ability to render Record Entry content down to the discrete element or item, including encoded fields.		RI.1.1.5	NC	EN
RI.1.1.5.1 Function	Evidence of Record Entry View/Access Event	RI.1.1.5.1	NC	EN
Statement: Maintain Evidence of Record Entry View/Access Event **Description:** Evidence of Record Entry View/Access Event includes key metadata, ensures health record integrity (and trust) and enables record audit.				
1. The system SHALL audit each occurrence when Record Entry content is viewed/accessed.		RI.1.1.5.1	NC	EN
2. The system SHALL capture identity of the organization where Record Entry content is viewed/accessed.		RI.1.1.5.1	NC	EN
3. The system SHALL capture identity of the patient who is subject of the viewed/accessed Record Entry content.		RI.1.1.5.1	NC	EN
4. The system SHALL capture identity of the user who viewed/accessed Record Entry content.		RI.1.1.5.1	NC	EN
5. The system SHALL capture identity of the system application in which Record Entry content is viewed/accessed.		RI.1.1.5.1	NC	EN
6. The system SHALL capture the type of Record Event trigger (i.e., view/access).		RI.1.1.5.1	NC	EN
7. The system SHALL capture the date and time Record Entry content is viewed/accessed.		RI.1.1.5.1	NC	EN
10. The system SHALL capture the data, document or other identifier for the viewed/accessed Record Entry content.		RI.1.1.5.1	NC	EN
12. The system SHALL capture when a Record Entry content view/access occurrence is known to be a disclosure, according to scope of practice, organizational policy, and/or jurisdictional law.		RI.1.1.5.1	NC	EN
13. The system SHOULD capture known and applicable permissions regarding Record Entry content viewed/accessed including confidentiality codes, patient consent authorizations, privacy policy pointers.		RI.1.1.5.1	NC	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
RI.1.1.6 Function	Output/Report Record Entry Content	RI.1.1.6	NC	EN
	Statement: Output/Report content of Record Entries (1 or more instances) **Description:** Occurs when Record Entry content is output or reported. - Output/reported Record Entry content is the responsibility of authorized User(s). - An Audit Trigger is initiated to track Record Entry content outputs and reports. Reference: ISO 21089, Section 12.5.			
1.	The system SHOULD provide the ability to render Record Entry content (e.g., as a report) retaining original, unaltered content and signature bindings, Action and Record Entry provenance and metadata.	RI.1.1.6	NC	EN
2.	The system SHALL provide the ability to render Record Entry extracts, including content, context, provenance and metadata.	RI.1.1.6	NC	EN
3.	The system SHALL provide the ability to capture the identity of the patient or the individual subject who is the target of Record Entry content that is presented/reported.	RI.1.1.6	NC	EN
4.	IF the identity of a specific recipient has been stored, THEN the system SHOULD render protected Record Entry content based on established permissions and according to scope of practice, organizational policy, and/or jurisdictional law.	RI.1.1.6	NC	EN
6.	The system SHALL conform to function TI.1.6 (Secure Data Exchange).	RI.1.1.6	NC	EN
7.	The system SHALL provide the ability to extract Record Entry content prior to output/report, conforming to function RI.1.1.13 (Extract Record Entry Content).	RI.1.1.6	NC	EN
8.	The system SHALL provide the ability to de-identify Record Entry content prior to output/report, conforming to function RI.1.1.10 (De-Identify Record Entries).	RI.1.1.6	NC	EN
9.	The system SHALL provide the ability to render updates (new versions) of Record Entry Content to known recipients of prior versions of that Record Entry Content according to scope of practice, organizational policy, and/or jurisdictional law.	RI.1.1.6	NC	EN
RI.1.1.6.1 Function	Evidence of Record Entry Output/Report Event	RI.1.1.6.1	NC	EN
	Statement: Maintain Evidence of Record Entry Output/Report Event **Description:** Evidence of Record Entry Output/Report Event includes key metadata, ensures health record integrity (and trust) and enables record audit.			
1.	The system SHALL audit each occurrence when an output (e.g., report, screen shot) is generated from Record Entry content.	RI.1.1.6.1	NC	EN
2.	The system SHALL capture identity of the organization where output/report is generated from Record Entry content.	RI.1.1.6.1	NC	EN
3.	The system SHALL capture identity of the patient who is subject of the Record Entry(ies) populating the output/report generated.	RI.1.1.6.1	NC	EN
4.	The system SHALL capture identity of the user who generated the output/report of Record Entry content.	RI.1.1.6.1	NC	EN
5.	The system SHALL capture identity of the system application from which the output/report is generated.	RI.1.1.6.1	NC	EN
6.	The system SHALL capture the type of Record Event trigger (i.e., output/report).	RI.1.1.6.1	NC	EN
7.	The system SHALL capture the date and time the output/report is generated.	RI.1.1.6.1	NC	EN
11.	The system SHALL capture when a Record Entry content output/report occurrence is known to be a disclosure, according to scope of practice, organizational policy, and/or jurisdictional law.	RI.1.1.6.1	NC	EN
12.	The system SHOULD capture known and applicable permissions regarding Record Entry content output/reported including confidentiality codes, patient consent authorizations, privacy policy pointers.	RI.1.1.6.1	NC	EN
RI.1.1.7 Function	Disclose Record Entry Content	RI.1.1.7	NC	EN
	Statement: Disclose content of Record Entries **Description:** Occurs when Record Entry content is disclosed according to scope of practice, organizational policy or jurisdictional law. - Disclosed Record Entry content is the responsibility of authorized User(s). - An Audit Trigger is initiated to track Record Entry content disclosures. Reference: ISO 21089, Section 12.5.			
1.	The system SHALL provide the ability to capture the identity of the patient or individual subject to whom Record Entry content was transmitted/disclosed.	RI.1.1.7	NC	EN
2.	The system SHALL capture a log entry for disclosure of protected Record Entry content, according to scope of practice, organizational policy, and/or jurisdictional law.	RI.1.1.7	NC	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
3. IF the identity of a specific recipient has been stored, THEN the system SHOULD render protected Record Entry content based on established permissions and according to scope of practice, organizational policy, and/or jurisdictional law.		RI.1.1.7	NC	EN
4. IF known and explicit as to Record Entry content being transmitted, THEN the system SHOULD transmit corresponding authorizations and patient consent permissions.		RI.1.1.7	NC	EN
5. The system SHALL conform to function TI.1.6 (Secure Data Exchange).		RI.1.1.7	NC	EN
6. The system SHALL provide the ability to extract Record Entry content prior to disclosure, conforming to function RI.1.1.13 (Extract Record Entry Content).		RI.1.1.7	NC	EN
7. The system SHALL provide the ability to de-identify Record Entry content prior to disclosure, conforming to function RI.1.1.10 (De-Identify Record Entries).		RI.1.1.7	NC	EN
RI.1.1.7.1 Function	Evidence of Record Entry Disclosure Event	RI.1.1.7.1	NC	EN
Statement: Maintain Evidence of Record Entry Disclosure Event **Description:** Evidence of Record Entry Disclosure Event includes key metadata, ensures health record integrity (and trust) and enables record audit.				
1. The system SHALL audit each occurrence when Record Entry content is disclosed according to scope of practice, organizational policy, and/or jurisdictional law.		RI.1.1.7.1	NC	EN
2. The system SHALL capture identity of the organization from which Record Entry content is disclosed.		RI.1.1.7.1	NC	EN
3. The system SHALL capture identity of the patient who is subject of Record Entry content disclosed.		RI.1.1.7.1	NC	EN
4. The system SHALL capture identity of the user initiating disclosure of Record Entry content.		RI.1.1.7.1	NC	EN
5. The system SHALL capture identity of the system application from which Record Entry content is disclosed.		RI.1.1.7.1	NC	EN
6. The system SHALL capture the type of Record Event trigger (i.e., disclose).		RI.1.1.7.1	NC	EN
7. The system SHALL capture the date and time Record Entry content is disclosed.		RI.1.1.7.1	NC	EN
11. The system SHALL capture that this is an occurrence when Record Entry content is known to be disclosed, according to scope of practice, organizational policy, and/or jurisdictional law.		RI.1.1.7.1	NC	EN
12. The system SHOULD capture known and applicable permissions regarding Record Entry content disclosed including confidentiality codes, patient consent authorizations, privacy policy pointers.		RI.1.1.7.1	NC	EN
RI.1.1.8 Function	Transmit Record Entry Content	RI.1.1.8	NC	EN
Statement: Transmit content of Record Entries (1 or more instances) **Description:** Occurs when Record Entry content is transmitted – typically to an external entity or system. - Transmittal may include original Record Entry content with subsequent amendment(s), if any. - Transmittal of Record Entries is the responsibility of the System – which invokes relevant rules. - An Audit Trigger is initiated to track Record Entry transmittal. Reference: ISO 21089, Section 12.8.1.				
2. The system SHALL provide the ability to transmit Record Entry extracts to external systems, including content, context, provenance and metadata.		RI.1.1.8	NC	EN
3. The system SHALL provide the ability to capture the identity of the patient or individual subject to whom Record Entry content was transmitted.		RI.1.1.8	NC	EN
4. IF a specific recipient is known, THEN the system SHOULD transmit protected Record Entry content based on established permissions and according to scope of practice, organizational policy, and/or jurisdictional law.		RI.1.1.8	NC	EN
5. IF known and explicit as to Record Entry content being transmitted, THEN the system SHOULD transmit corresponding authorizations and patient consent permissions.		RI.1.1.8	NC	EN
6. The system SHALL conform to function TI.1.6 (Secure Data Exchange).		RI.1.1.8	NC	EN
7. The system SHALL provide the ability to extract Record Entry content prior to transmittal, conforming to function RI.1.1.13 (Extract Record Entry Content).		RI.1.1.8	NC	EN
8. The system SHALL provide the ability to de-identify Record Entry content prior to transmittal, conforming to function RI.1.1.10 (De-Identify Record Entries).		RI.1.1.8	NC	EN
9. The system SHALL provide the ability to transmit updates (new versions) of Record Entry Content to known recipients of prior versions according to scope of practice, organizational policy, and/or jurisdictional law.		RI.1.1.8	NC	EN
10. The system SHALL provide the ability to transmit with each exchange the most recent or all versions of Record Entry Content according to scope of practice, organizational policy, and/or jurisdictional law.		RI.1.1.8	NC	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
RI.1.1.8.1 Function	Evidence of Record Entry Transmit Event	RI.1.1.8.1	NC	EN
	Statement: Maintain Evidence of Record Entry Transmit Event **Description:** Evidence of Record Entry Transmit Event includes key metadata, ensures health record integrity (and trust) and enables record audit.			
	1. The system SHALL audit each occurrence when Record Entry content is transmitted.	RI.1.1.8.1	NC	EN
	2. The system SHALL capture identity of the organization from which Record Entry content is transmitted.	RI.1.1.8.1	NC	EN
	3. The system SHALL capture identity of the patient who is subject of Record Entry content transmitted.	RI.1.1.8.1	NC	EN
	4. The system SHALL capture identity of the user initiating transmission of Record Entry content.	RI.1.1.8.1	NC	EN
	5. The system SHALL capture identity of the system application which transmitted Record Entry content.	RI.1.1.8.1	NC	EN
	6. The system SHALL capture identity of the system application which received Record Entry content.	RI.1.1.8.1	NC	EN
	7. The system SHALL capture the type of Record Event trigger (i.e., transmit).	RI.1.1.8.1	NC	EN
	8. The system SHALL capture the date and time Record Entry content is transmitted.	RI.1.1.8.1	NC	EN
	10. The system SHALL capture the location (network address) to which the Record Entry is transmitted/disclosed.	RI.1.1.8.1	NC	EN
	12. The system SHALL capture the type of Record Entry content transmitted/disclosed (e.g., original, amended, updated data).	RI.1.1.8.1	NC	EN
	15. The system SHALL capture when a Record Entry transmit occurrence is known to be a disclosure, according to scope of practice, organizational policy, and/or jurisdictional law.	RI.1.1.8.1	NC	EN
	16. The system SHOULD capture known and applicable permissions regarding Record Entry content transmitted including confidentiality codes, patient consent authorizations, privacy policy pointers.	RI.1.1.8.1	NC	EN
RI.1.1.9 Function	Receive and Retain Record Entries	RI.1.1.9	NC	EN
	Statement: Receive and retain/persist content of Record Entries (1 or more instances) **Description:** Occurs when Record Entry content is received – typically from an external system. - Receipt of Record Entries is the responsibility of the System – which invokes relevant rules. - An Audit Trigger is initiated to track Record Entry receipt and retention. Reference: ISO 21089, Section 12.8.1.			
	1. The system SHOULD 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 provenance and metadata.	RI.1.1.9	NC	EN
	2. The system SHALL provide the ability to capture and maintain Record Entry extracts from external systems, retaining and persisting source, identity, record content, corresponding provenance and metadata.	RI.1.1.9	NC	EN
	3. The system SHALL provide the ability to capture the identity of the patient or individual subject to whom Record Entry content was received.	RI.1.1.9	NC	EN
	4. IF received with Record Entry content, THEN the system SHOULD control subsequent data access to that permitted by corresponding authorizations and patient consents.	RI.1.1.9	NC	EN
RI.1.1.9.1 Function	Evidence of Record Entry Receive/Retain Event	RI.1.1.9.1	NC	EN
	Statement: Maintain Evidence of Record Entry Receive/Retain Event **Description:** Evidence of Record Entry Receive/Retain Event includes key metadata, ensures health record integrity (and trust) and enables record audit.			
	1. The system SHALL audit each occurrence when externally-sourced Record Entry content is received and retained.	RI.1.1.9.1	NC	EN
	2. The system SHALL capture identity of the organization transmitting Record Entry content received and retained.	RI.1.1.9.1	NC	EN
	3. The system SHALL capture identity of the organization receiving transmitted Record Entry content.	RI.1.1.9.1	NC	EN
	4. The system SHALL capture identity of the patient who is subject of received Record Entry content.	RI.1.1.9.1	NC	EN
	5. IF the system supports user verification of receipt of externally-sourced Record Entry content, THEN the system SHALL capture identity of the user accepting receipt of the transmitted Record Entry content.	RI.1.1.9.1	NC	EN
	6. The system SHALL capture identity of the system application which transmitted Record Entry content.	RI.1.1.9.1	NC	EN
	7. The system SHALL capture identity of the system application which received Record Entry content.	RI.1.1.9.1	NC	EN
	8. The system SHALL capture the type of Record Event trigger (i.e., receive).	RI.1.1.9.1	NC	EN
	9. The system SHALL capture the date and time Record Entry content is received.	RI.1.1.9.1	NC	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
12. The system SHALL capture the type of Record Entry content received (e.g., original, amended, updated data).		RI.1.1.9.1	NC	EN
RI.1.1.10 Function	De-identify Record Entries	RI.1.1.10	NC	EN
Statement: De-identify content of Record Entries (1 or more instances) **Description:** Occurs when Record Entry content is transformed into de-identified version. - De-identification of Record Entries may be initiated by User command. - De-identification of Record Entries is the responsibility of the System – which invokes relevant rules. - An Audit Trigger is initiated to track Record Entry de-identification. Reference: ISO 21089, Section 12.6.1.				
1. The system SHALL provide the ability to de-identify Record Entry content according to scope of practice, organizational policy, and/or jurisdictional law.		RI.1.1.10	NC	EN
RI.1.1.10.1 Function	Evidence of Record Entry De-Identification Event	RI.1.1.10.1	NC	EN
Statement: Maintain Evidence of Record Entry De-Identification Event **Description:** Evidence of Record Entry De-Identification Event includes key metadata, ensures health record integrity (and trust) and enables record audit.				
1. The system SHALL audit each occurrence when Record Entry content is de-identified.		RI.1.1.10.1	NC	EN
2. The system SHALL capture identity of the organization where Record Entry content is de-identified.		RI.1.1.10.1	NC	EN
3. The system SHALL capture identity of the patient who is subject of de-identified Record Entry content.		RI.1.1.10.1	NC	EN
4. The system SHALL capture identity of the user de-identifying Record Entry content.		RI.1.1.10.1	NC	EN
5. The system SHALL capture identity of the system application which de-identified Record Entry content.		RI.1.1.10.1	NC	EN
6. The system SHALL capture the type of Record Event trigger (i.e., de-identify).		RI.1.1.10.1	NC	EN
7. The system SHALL capture the date and time Record Entry content is de-identified.		RI.1.1.10.1	NC	EN
RI.1.1.11 Function	Pseudomynize Record Entries	RI.1.1.11	NC	EN
Statement: Provide pseudomynized identity for Record Entries (1 or more instances) **Description:** Occurs when Record Entry is transformed into an pseudomynized version. - Pseudomynization allows records to be later re-identified. - Pseudomynization of Record Entries may be initiated by User command. - Pseudomynization of Record Entries is the responsibility of the System – which invokes relevant rules. - An Audit Trigger is initiated to track Record Entry pseudomynization. Reference: ISO 21089, Section 12.6.1.				
1. The system SHALL provide the ability to de-identify patient Record Entries by pseudomizing patient Record Entries (or associating them with a new identity) according to scope of practice, organizational policy, and/or jurisdictional law.		RI.1.1.11	NC	EN
RI.1.1.11.1 Function	Evidence of Record Entry Pseudomynization Event	RI.1.1.11.1	NC	EN
Statement: Maintain Evidence of Record Entry Pseudomynization Event **Description:** Evidence of Record Entry Pseudomynization Event includes key metadata, ensures health record integrity (and trust) and enables record audit.				
1. The system SHALL audit each occurrence when a Record Entry content is pseudomynized.		RI.1.1.11.1	NC	EN
2. The system SHALL capture identity of the organization where Record Entry content is pseudomynized.		RI.1.1.11.1	NC	EN
3. The system SHALL capture identity of the patient who is subject of pseudomynized Record Entry content.		RI.1.1.11.1	NC	EN
4. The system SHALL capture identity of the user pseudomynizing Record Entry content.		RI.1.1.11.1	NC	EN
5. The system SHALL capture identity of the system application which pseudomynized Record Entry content.		RI.1.1.11.1	NC	EN
6. The system SHALL capture the type of Record Event trigger (i.e., pseudomynize).		RI.1.1.11.1	NC	EN
7. The system SHALL capture the date and time Record Entry content is pseudomynized.		RI.1.1.11.1	NC	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
RI.1.1.12 Function	Re-identify Record Entries	RI.1.1.12	NC	EN
	Statement: Re-identify previously aliased identity for content of Record Entries (1 or more instances) **Description:** Occurs when Record Entries are re-identified from a previously aliased version. - Re-identification of Record Entries is the responsibility of the System – which invokes relevant rules. - An Audit Trigger is initiated to track Record Entry re-identification. Reference: ISO 21089, Section 12.6.2.			
1.	The system SHALL provide the ability to re-identify (or associate original identity with) Record Entry content according to scope of practice, organizational policy, and/or jurisdictional law.	RI.1.1.12	NC	EN
RI.1.1.12.1 Function	Evidence of Record Entry Re-Identification Event	RI.1.1.12.1	NC	EN
	Statement: Maintain Evidence of Record Entry Re-Identification Event **Description:** Evidence of Record Entry Re-Identification Event includes key metadata, ensures health record integrity (and trust) and enables record audit.			
1.	The system SHALL audit each occurrence when Record Entry content is re-identified.	RI.1.1.12.1	NC	EN
2.	The system SHALL capture identity of the organization where Record Entry content is re-identified.	RI.1.1.12.1	NC	EN
3.	The system SHALL capture identity of the patient who is subject of re-identified Record Entry content.	RI.1.1.12.1	NC	EN
4.	The system SHALL capture identity of the user re-identifying Record Entry content.	RI.1.1.12.1	NC	EN
5.	The system SHALL capture identity of the system application which re-identified Record Entry content.	RI.1.1.12.1	NC	EN
6.	The system SHALL capture the type of Record Event trigger (i.e., re-identify).	RI.1.1.12.1	NC	EN
7.	The system SHALL capture the date and time Record Entry content is re-identified.	RI.1.1.12.1	NC	EN
RI.1.1.13 Function	Extract Record Entry Content	RI.1.1.13	NC	EN
	Statement: Extract Record Entry content to produce subsets, derivations, summaries or aggregations (Multiple instances) **Description:** Occurs when Record Entry content is extracted to render subsets, derivations, summaries or aggregations. - Extraction of Record Entry content may be initiated by User command, and/or rules-based algorithm. - Extraction of Record Entry content is the responsibility of the System – which invokes relevant rules. - An Audit Trigger is initiated to track Record Entry content extraction. Reference: ISO 21089, Section 12.7. An EHR-S enables an authorized user, such as a clinician, to access and aggregate the distributed information, which corresponds to the health record or records that are needed for viewing, reporting, disclosure, etc. An EHR-S must support data extraction operations across the complete data set that constitutes the health record of an individual and provide an output that fully chronicles the healthcare process. Data extractions are used as input to patient care coordination between facilities, organizations and settings. In addition, data extractions can be used for administrative, financial, research, quality analysis, public health purposes, and to enable re-creation of copies for importing into different EHR applications and enable the archiving of patients' data. Data may be extracted in order to meet analysis and reporting requirements. The extracted data may require use of more than one application and it may be pre-processed (for example, by being de-identified) before transmission. Data extractions may be used to exchange data and provide reports for primary and ancillary purposes.			
1.	The system SHALL provide the ability to extract Record Entry content to produce subsets, derivations, summaries or aggregations according to scope of practice, organizational policy, and/or jurisdictional law.	RI.1.1.13	NC	EN
2.	The system SHALL provide the ability to de-identify Record Entries during extraction in accordance with function RI.1.1.10 (De-Identify Record Entries).	RI.1.1.13	NC	EN
3.	The system SHALL provide the ability to extract Record Entry content based on queries with selection criteria, for example, key words, date/time range, full text search.	RI.1.1.13	NC	EN
4.	The system SHALL provide the ability to extract metadata associated with Record Entry content.	RI.1.1.13	NC	EN
8.	The system SHALL provide the ability to extract Record Entry content for various purposes, including administrative, financial, research, quality analysis and public health.	RI.1.1.13	NC	EN
9.	The system SHOULD provide the ability to extract Record Entries for system migration.	RI.1.1.13	NC	EN
10.	The system SHOULD provide the ability to manage a set of over-riding parameters to exclude sensitive or privileged Record Entry content from extraction.	RI.1.1.13	NC	EN
RI.1.1.13.1 Function	Evidence of Record Entry Extraction Event	RI.1.1.13.1	NC	EN
	Statement: Maintain Evidence of Record Entry Extraction Event **Description:** Evidence of Record Entry Extraction Events includes key metadata, ensures health record integrity (and trust) and enables record audit.			
1.	The system SHALL audit each occurrence when Record Entry content is extracted.	RI.1.1.13.1	NC	EN
2.	The system SHALL capture identity of the organization where Record Entry content is extracted.	RI.1.1.13.1	NC	EN

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3. The system SHALL capture identity of the patient who is subject of extracted Record Entry content.		RI.1.1.13.1	NC	EN
4. The system SHALL capture identity of the user extracting Record Entry content.		RI.1.1.13.1	NC	EN
5. The system SHALL capture identity of the system application which extracted Record Entry content.		RI.1.1.13.1	NC	EN
6. The system SHALL capture the type of Record Event trigger (i.e., extract).		RI.1.1.13.1	NC	EN
7. The system SHALL capture the date and time Record Entry content is extracted.		RI.1.1.13.1	NC	EN
RI.1.1.14 Function	Archive Record Entries	RI.1.1.14	NC	EN
Statement: Archive Record Entries (1 or more instances) **Description:** Occurs when Record Entries are archived – typically to off-line (less readily available) storage media. - Archival of Record Entries may be initiated by User command. - Archival of Record Entries is the responsibility of the System – which invokes relevant rules. - An Audit Trigger is initiated to track Record Entry archival. Reference: ISO 21089, Section 12.10.				
1. The system SHALL archive Record Entries according to function RI.3 (Manage Record Archive and Restore).		RI.1.1.14	NC	EN
RI.1.1.14.1 Function	Evidence of Record Entry Archive Event	RI.1.1.14.1	NC	EN
Statement: Maintain Evidence of Record Entry Archive Event **Description:** Evidence of Record Entry Archive Event includes key metadata, ensures health record integrity (and trust) and enables record audit.				
1. The system SHALL audit each occurrence when Record Entry content is archived.		RI.1.1.14.1	NC	EN
2. The system SHALL capture identity of the organization where Record Entry content is archived.		RI.1.1.14.1	NC	EN
3. The system SHALL capture identity of the patient who is subject of archived Record Entry content.		RI.1.1.14.1	NC	EN
4. The system SHALL capture an archive identifier for archived Record Entry content (e.g., nursing home inpatient stay from 3/15/2000 thru 6/10/2000).		RI.1.1.14.1	NC	EN
5. The system SHALL capture identity of the user archiving Record Entry content.		RI.1.1.14.1	NC	EN
6. The system SHALL capture identity of the system application which archived Record Entry content.		RI.1.1.14.1	NC	EN
7. The system SHALL capture the type of Record Event trigger (i.e., archive).		RI.1.1.14.1	NC	EN
8. The system SHALL capture the date and time Record Entry content is archived.		RI.1.1.14.1	NC	EN
11. The system SHALL capture the set of Record Entry content to be archived.		RI.1.1.14.1	NC	EN
RI.1.1.15 Function	Restore (previously archived) Record Entries	RI.1.1.15	NC	EN
Statement: Restore previously archived Record Entries (1 or more instances) **Description:** Occurs when Record Entries are restored from archive. - Restore of Record Entries may be initiated by User command. - Restoration of Record Entries is the responsibility of the System – which invokes relevant rules. - An Audit Trigger is initiated to track Record Entry restoration. Reference: ISO 21089, Section 12.10.				
1. The system SHALL provide the ability to restore (previously archived) Record Entries according to scope of practice, organizational policy, and/or jurisdictional law.		RI.1.1.15	NC	EN
RI.1.1.15.1 Function	Evidence of Record Entry Restore Event	RI.1.1.15.1	NC	EN
Statement: Maintain Evidence of Record Entry Restore Event **Description:** Evidence of Record Entry Restore Event includes key metadata, ensures health record integrity (and trust) and enables record audit.				
1. The system SHALL audit each occurrence when archived Record Entry content is restored.		RI.1.1.15.1	NC	EN
2. The system SHALL capture identity of the organization where Record Entry content is restored.		RI.1.1.15.1	NC	EN
3. The system SHALL capture identity of the patient who is subject of restored Record Entry content.		RI.1.1.15.1	NC	EN
4. The system SHALL capture an archive identifier for restored Record Entry content (e.g., nursing home inpatient stay from 3/15/2000 thru 6/10/2000).		RI.1.1.15.1	NC	EN
5. The system SHALL capture identity of the user restoring Record Entry content.		RI.1.1.15.1	NC	EN
6. The system SHALL capture identity of the system application which restored Record Entry content.		RI.1.1.15.1	NC	EN
7. The system SHALL capture the type of Record Event trigger (i.e., restore).		RI.1.1.15.1	NC	EN
8. The system SHALL capture the date and time Record Entry content is restored.		RI.1.1.15.1	NC	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
RI.1.1.16 Function	Destroy or Identify Record Entries as Missing	RI.1.1.16	NC	EN
	Statement: Destroy or Identify Record Entries as Missing (1 or more instances) **Description:** Occurs when Record Entries are destroyed or identified as missing. - Destruction 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 – which invokes relevant rules. - An Audit Trigger is initiated to track Record Entry Destruction or Notation as Missing. Reference: ISO 21089, Section 12.11.			
1.	The system SHALL provide the ability to delete (destroy) Record Entries (e.g., those exceeding their legal retention period) according to scope of practice, organizational policy, and/or jurisdictional law.	RI.1.1.16	NC	EN
2.	The system SHALL provide the ability to tag Record Entries as missing.	RI.1.1.16	NC	EN
RI.1.1.16.1 Function	Evidence of Record Entry Destruction Event	RI.1.1.16.1	NC	EN
	Statement: Maintain Evidence of Record Entry Destruction Event **Description:** Evidence of Record Entry Destruction Event includes key metadata, ensures health record integrity (and trust) and enables record audit.			
1.	The system SHALL audit each occurrence when Record Entry content is destroyed according to scope of practice, organizational policy, and/or jurisdictional law.	RI.1.1.16.1	NC	EN
2.	The system SHALL capture identity of the organization where Record Entry content is destroyed.	RI.1.1.16.1	NC	EN
3.	The system SHALL capture identity of the patient who is subject of destroyed Record Entry content.	RI.1.1.16.1	NC	EN
4.	The system SHALL capture a destruction identifier for destroyed Record Entry content (e.g., nursing home inpatient stay from 3/15/2000 thru 6/10/2000).	RI.1.1.16.1	NC	EN
5.	The system SHALL capture identity of the user destroying Record Entry content.	RI.1.1.16.1	NC	EN
6.	The system SHALL capture identity of the system application which destroyed Record Entry content.	RI.1.1.16.1	NC	EN
7.	The system SHALL capture the type of Record Event trigger (i.e., destroy).	RI.1.1.16.1	NC	EN
8.	The system SHALL capture the date and time Record Entry content is destroyed.	RI.1.1.16.1	NC	EN
RI.1.1.17 Function	Deprecate/Retract Record Entries	RI.1.1.17	NC	EN
	Statement: Deprecate/retract Record Entries as invalid (1 or more instances) **Description:** Occurs when Record Entries are deprecated if 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 – which invokes relevant rules. - An Audit Trigger is initiated to track Record Entry Deprecation.			
1.	The system SHALL provide the ability to tag Record Entries as deprecated/retracted and indicating that they are invalid according to scope of practice, organizational policy, and/or jurisdictional law.	RI.1.1.17	NC	EN
RI.1.1.17.1 Function	Evidence of Record Entry Deprecation/Retraction Event	RI.1.1.17.1	NC	EN
	Statement: Maintain Evidence of Record Entry Deprecation/Retraction Event **Description:** Evidence of Record Entry Deprecation/Retraction Event includes key metadata, ensures health record integrity (and trust) and enables record audit.			
1.	The system SHALL audit each occurrence when Record Entry content is deprecated/retracted.	RI.1.1.17.1	NC	EN
2.	The system SHALL capture identity of the organization where Record Entry content is deprecated/ retracted.	RI.1.1.17.1	NC	EN
3.	The system SHALL capture identity of the patient who is subject of deprecated/retracted Record Entry content.	RI.1.1.17.1	NC	EN
4.	The system SHALL capture identity of the user deprecating/retracting Record Entry content.	RI.1.1.17.1	NC	EN
5.	The system SHALL capture identity of the system application which deprecated/retracted Record Entry content.	RI.1.1.17.1	NC	EN
6.	The system SHALL capture the type of Record Event trigger (i.e., deprecate/retract).	RI.1.1.17.1	NC	EN
7.	The system SHALL capture the date and time Record Entry content is deprecated/retracted.	RI.1.1.17.1	NC	EN
8.	The system SHALL capture identity of the location (i.e., network address) where Record Entry content is deprecated/retracted.	RI.1.1.17.1	NC	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
RI.1.1.18 Function	Re-Activate Record Entries	RI.1.1.18	NC	EN
	Statement: Re-activate Record Entries (1 or more instances) **Description:** Occurs when Record Entries are made active again after previously Destroy or Deprecate. - Re-activation of Record Entries may be initiated by User command. - Re-activation of Record Entries is the responsibility of the System – which invokes relevant rules. - An Audit Trigger is initiated to track Record Entry Re-Activation.			
	1. The system SHALL provide the ability to untag Record Entries that were previously tagged as being deleted or deprecated (or tag Record Entries as no longer being deleted that were previously deleted, or as no longer being deprecated that were previously deprecated) and thus reactivate those Record Entries according to scope of practice, organizational policy, and/or jurisdictional law.	RI.1.1.18	NC	EN
RI.1.1.18.1 Function	Evidence of Record Entry Re-Activation Event	RI.1.1.18.1	NC	EN
	Statement: Maintain Evidence of Record Entry Re-Activation Event **Description:** Evidence of Record Entry Re-Activation Event includes key metadata, ensures health record integrity (and trust) and enables record audit.			
	1. The system SHALL audit each occurrence when destroyed or deprecated Record Entry content is re-activated.	RI.1.1.18.1	NC	EN
	2. The system SHALL capture identity of the organization where Record Entry content is reactivated.	RI.1.1.18.1	NC	EN
	3. The system SHALL capture identity of the patient who is subject of reactivated Record Entry content.	RI.1.1.18.1	NC	EN
	4. The system SHALL capture identity of the user reactivating Record Entry content.	RI.1.1.18.1	NC	EN
	5. The system SHALL capture identity of the system application which re-activated Record Entry content.	RI.1.1.18.1	NC	EN
	6. The system SHALL capture the type of Record Event trigger (i.e., re-activate).	RI.1.1.18.1	NC	EN
	7. The system SHALL capture the date and time Record Entry content is re-activated.	RI.1.1.18.1	NC	EN
RI.1.1.19 Function	Merge Record Entries	RI.1.1.19	NC	EN
	Statement: Merge Record Entries (2 or more instances) **Description:** Occurs when Record Entries are merged together. - Entries may be merged if duplicate patient records are found.			
	1. The system SHALL provide the ability to harmonize or integrate patient Record Entries by logically merging patient Record Entries according to scope of practice, organizational policy, and/or jurisdictional law.	RI.1.1.19	NC	EN
RI.1.1.19.1 Function	Evidence of Record Entry Merge Event	RI.1.1.19.1	NC	EN
	Statement: Maintain Evidence of Record Entry Merge Event **Description:** Evidence of Record Entry Merge Event includes key metadata, ensures health record integrity (and trust) and enables record audit.			
	1. The system SHALL audit each occurrence when Record Entries are merged (e.g., same patient, multiple sets of record entries).	RI.1.1.19.1	NC	EN
	2. The system SHALL capture identity of the organization where Record Entries are merged.	RI.1.1.19.1	NC	EN
	3. The system SHALL capture identity of the patient who is subject of merged Record Entries.	RI.1.1.19.1	NC	EN
	4. The system SHALL capture the identifier for the source set of Record Entries.	RI.1.1.19.1	NC	EN
	5. The system SHALL capture the identifier for the target set of Record Entries.	RI.1.1.19.1	NC	EN
	6. The system SHALL capture identity of the user merging Record Entries.	RI.1.1.19.1	NC	EN
	7. The system SHALL capture identity of the system application which merged Record Entries.	RI.1.1.19.1	NC	EN
	8. The system SHALL capture the type of Record Event trigger (i.e., merge).	RI.1.1.19.1	NC	EN
	9. The system SHALL capture the date and time Record Entries are merged.	RI.1.1.19.1	NC	EN
	10. The system SHALL capture identity of the location (i.e., network address) where Record Entries are merged.	RI.1.1.19.1	NC	EN
RI.1.1.20 Function	Unmerge Record Entries	RI.1.1.20	NC	EN
	Statement: Unmerge previously merged Record Entries (2 or more instances) **Description:** Occurs when Record Entries must be unmerged from previous merge, as in RI.1.1.16 .			
	1. The system SHALL provide the ability to update multiple patient Record Entries that were previously harmonized or integrated by unmerging them according to scope of practice, organizational policy, and/or jurisdictional law.	RI.1.1.20	NC	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
RI.1.1.20.1 Function	Evidence of Record Entry Unmerge Event	RI.1.1.20.1	NC	EN
	Statement: Maintain Evidence of Record Entry Unmerge Event **Description:** Evidence of Record Entry Unmerge Event includes key metadata, ensures health record integrity (and trust) and enables record audit.			
1. The system SHALL audit each occurrence when merged Record Entries are unmerged.		RI.1.1.20.1	NC	EN
2. The system SHALL capture identity of the organization where Record Entries are unmerged.		RI.1.1.20.1	NC	EN
3. The system SHALL capture identity of the patient who is subject of unmerged Record Entries.		RI.1.1.20.1	NC	EN
4. The system SHALL capture the identifier for the source set of Record Entries.		RI.1.1.20.1	NC	EN
5. The system SHALL capture the identifier for the target set of Record Entries.		RI.1.1.20.1	NC	EN
6. The system SHALL capture identity of the user unmerging Record Entries.		RI.1.1.20.1	NC	EN
7. The system SHALL capture identity of the system application which unmerged Record Entries.		RI.1.1.20.1	NC	EN
8. The system SHALL capture the type of Record Event trigger (i.e., unmerge).		RI.1.1.20.1	NC	EN
9. The system SHALL capture the date and time Record Entries are unmerged.		RI.1.1.20.1	NC	EN
RI.1.1.21 Function	Link Record Entries	RI.1.1.21	NC	EN
	Statement: Link Record Entries (2 or more instances) **Description:** Occurs when Record Entries are linked together. - Entries may be linked for a single an encounter (patient visit)- Entries may be linked for an episode (patient problem)- Entries may be linked for a selected population cohort			
1. The system SHALL provide the ability to link patient Record Entries logically according to scope of practice, organizational policy, and/or jurisdictional law.		RI.1.1.21	NC	EN
RI.1.1.21.1 Function	Evidence of Record Entry Link Event	RI.1.1.21.1	NC	EN
	Statement: Maintain Evidence of Record Entry Link Event **Description:** Evidence of Record Entry Link Event includes key metadata, ensures health record integrity (and trust) and enables record audit.			
1. The system SHOULD audit each occurrence when Record Entries are linked to another entry/ object (e.g., Record Entries in an external system).		RI.1.1.21.1	NC	EN
2. The system SHOULD capture identity of the organization where Record Entries are linked.		RI.1.1.21.1	NC	EN
3. The system SHOULD capture identity of the patient who is subject of linked Record Entries.		RI.1.1.21.1	NC	EN
4. The system SHOULD capture identity of the user linking Record Entries.		RI.1.1.21.1	NC	EN
5. The system SHOULD capture identity of the system application which linked Record Entries.		RI.1.1.21.1	NC	EN
6. The system SHOULD capture the type of Record Event trigger (i.e., link).		RI.1.1.21.1	NC	EN
7. The system SHOULD capture the date and time Record Entries are linked.		RI.1.1.21.1	NC	EN
RI.1.1.22 Function	Unlink Record Entries	RI.1.1.22	NC	EN
	Statement: Unlink previously linked Record Entries (2 or more instances) **Description:** Occurs when Record Entries must be unlinked from previous linkage, as in RI.1.1.18 .			
1. The system SHALL provide the ability to update multiple patient Record Entries by unlinking them according to scope of practice, organizational policy, and/or jurisdictional law.		RI.1.1.22	NC	EN
RI.1.1.22.1 Function	Evidence of Record Entry Unlink Event	RI.1.1.22.1	NC	EN
	Statement: Maintain Evidence of Record Entry Unlink Event **Description:** Evidence of Record Entry Unlink Event includes key metadata, ensures health record integrity (and trust) and enables record audit.			
1. The system SHOULD audit each occurrence when linked Record Entries are unlinked from another entry/object.		RI.1.1.22.1	NC	EN
2. The system SHOULD capture identity of the organization where Record Entries are unlinked.		RI.1.1.22.1	NC	EN
3. The system SHOULD capture identity of the patient who is subject of un-linked Record Entry.		RI.1.1.22.1	NC	EN
4. The system SHOULD capture identity of the user unlinking Record Entries.		RI.1.1.22.1	NC	EN
5. The system SHOULD capture identity of the system application which unlinked Record Entries.		RI.1.1.22.1	NC	EN
6. The system SHOULD capture the type of Record Event trigger (i.e., unlink).		RI.1.1.22.1	NC	EN
7. The system SHOULD capture the date and time Record Entries are unlinked.		RI.1.1.22.1	NC	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
RI.1.1.23 Function	Place Record Entries on Legal Hold	RI.1.1.23	NC	EN
	Statement: Hold Record Entries in an unaltered state for legal hold period (1 or more instances) **Description:** Occurs when Record Entries must be marked (and held in an unaltered state) for purposes of a legal hold (typically as the result of court or legal action).			
1. The system SHALL provide the ability to manage a specified set of patient Record Entries during period of legal hold, marking as to on hold status and preventing alteration according to scope of practice, organizational policy, and/or jurisdictional law.		RI.1.1.23	NC	EN
RI.1.1.23.1 Function	Evidence of Record Entry Legal Hold Event	RI.1.1.23.1	NC	EN
	Statement: Maintain Evidence of Record Entry Legal Hold Event **Description:** Evidence of Record Entry Legal Hold Event includes key metadata, ensures health record integrity (and trust) and enables record audit.			
1. The system SHOULD audit each occurrence when a set of Record Entries are placed on legal hold.		RI.1.1.23.1	NC	EN
2. The system SHOULD capture identity of the organization where Record Entries are placed on legal hold.		RI.1.1.23.1	NC	EN
3. The system SHOULD capture identity of the patient who is subject of Record Entries placed on legal hold.		RI.1.1.23.1	NC	EN
4. The system SHOULD capture the identifier for the set of Record Entries placed on legal hold.		RI.1.1.23.1	NC	EN
5. The system SHOULD capture identity of the user placing Record Entries on legal hold.		RI.1.1.23.1	NC	EN
6. The system SHOULD capture identity of the system application which placed Record Entries on legal hold.		RI.1.1.23.1	NC	EN
7. The system SHOULD capture the type of Record Event trigger (i.e., placed on legal hold).		RI.1.1.23.1	NC	EN
8. The system SHOULD capture the date and time Record Entries are placed on legal hold.		RI.1.1.23.1	NC	EN
9. The system SHOULD capture identity of the location (i.e., network address) from which Record Entries are placed on legal hold.		RI.1.1.23.1	NC	EN
RI.1.1.24 Function	Release Record Entries from Legal Hold	RI.1.1.24	NC	EN
	Statement: Release legal hold on Record Entries (1 or more instances) **Description:** Occurs when Record Entries are released from legal hold (previously marked and held in unaltered state), as in RI.1.1.20 .			
1. The system SHALL provide the ability to update the legal hold status of patient Record Entries by releasing the patient Record Entries from legal hold according to scope of practice, organizational policy, and/or jurisdictional law.		RI.1.1.24	NC	EN
RI.1.1.24.1 Function	Evidence of Record Entry Legal Hold Removal Event	RI.1.1.24.1	NC	EN
	Statement: Maintain Evidence of Record Entry Legal Hold Removal Event **Description:** Evidence of Record Entry Legal Hold Removal Event includes key metadata, ensures health record integrity (and trust) and enables record audit.			
3. The system SHALL capture identity of the patient who is subject of Record Entries released from legal hold.		RI.1.1.24.1	NC	EN
4. The system SHALL capture identity of the user releasing Record Entries from legal hold.		RI.1.1.24.1	NC	EN
5. The system SHALL capture identity of the system application which released Record Entries from legal hold.		RI.1.1.24.1	NC	EN
7. The system SHALL capture the date and time Record Entries are released from legal hold.		RI.1.1.24.1	NC	EN
RI.1.2 Header	Record Lifespan	RI.1.2	NC	EN
	Statement: Manage Record Lifespan **Description:** Record Lifecycle Events (Function RI.1.1) are those required to manage Record Entries in persistent storage over the full course of Record Lifespan (Section RI.1.2). See Section RI.1.1 , Record Lifecycle, for further description.			
RI.1.2.1 Function	Manage Record Entries	RI.1.2.1	NC	EN
	Statement: Manage/Persist Record Entries (Multiple instances) **Description:** Occurs upon Record Entry origination/retention and thereafter on a continuous and uninterrupted basis for lifespan of each Record Entry. - Ensures long-term retention and preservation of EHR Record Entries, without alteration. Reference: ISO 21089, Section 12.2.2			
1. The system SHALL manage each Record Entry as a persistent, indelible (unalterable) data object, including its revision history.		RI.1.2.1	NC	EN

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2.	The system SHALL manage (persist) each Record Entry for its applicable retention period according to scope of practice, organizational policy, and/or jurisdictional law.	RI.1.2.1	NC	EN
3.	The system SHALL manage (persist) the full set of identity, event and provenance Audit Metadata for each Record Entry, conforming to lifecycle events in function RI.1.1 (Record Lifecycle) and metadata requirements in function TI.2.1.1 (Record Entry Audit Triggers).	RI.1.2.1	NC	EN
4.	The system SHALL manage (persist) the attestation/signature event (e.g., digital signature) of each Record Entry conforming to function RI.1.1.4 (Attest Record Entry Content).	RI.1.2.1	NC	EN
5.	The system SHALL manage Record Entries with data content in standard and non-standard formats.	RI.1.2.1	NC	EN
6.	The system SHALL manage Record Entries containing both structured and unstructured data.	RI.1.2.1	NC	EN
10.	The system SHOULD 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 scope of practice, organizational policy, and/or jurisdictional law.	RI.1.2.1	NC	EN
17.	The system SHOULD manage health care information for organizations that have multiple facilities according to scope of practice, organizational policy, and/or jurisdictional law.	RI.1.2.1	NC	EN
RI.1.2.2 Function	Manage Record Entries for Legal Hold	RI.1.2.2	NC	EN
	Statement: Manage/Preserve Record Entries for Legal Hold (Multiple instances) **Description:** Occurs when a set of Record Entries is designated to be held for legal purposes or proceedings. - Ensures preservation of a set of Record Entries for a designated time, held without alteration.			
1.	The system SHALL conform to function RI.1.1.23 (Place Record Entries on Legal Hold).	RI.1.2.2	NC	EN
2.	The system SHALL conform to function RI.1.1.24 (Release Record Entries from Legal Hold).	RI.1.2.2	NC	EN
3.	The system SHALL provide the ability to control access to data/records during legal hold, preventing un-auditable alteration or unauthorized use for preservation purposes.	RI.1.2.2	NC	EN
4.	The system SHALL provide the ability to maintain records beyond normal retention period according to scope of practice, organizational policy, and/or jurisdictional law.	RI.1.2.2	NC	EN
5.	The system SHOULD provide the ability to capture the reason for preserving records beyond the normal retention period.	RI.1.2.2	NC	EN
6.	The system SHOULD 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.	RI.1.2.2	NC	EN
7.	The system MAY 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.), conforming to function RI.1.1.13 (Extract Record Entry Content).	RI.1.2.2	NC	EN
RI.1.3 Header	Record States	RI.1.3	NC	EN
	Statement: Manage Record States **Description:** Record Entries may reside in various states that must be managed. 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 used.			
RI.1.3.1 Function	Manage Record Pending State	RI.1.3.1	NC	EN
	Statement: Manage Record Entries during the various states of completion. **Description:** Record Entries may reside in various states that must be managed. 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 it has not been completed or attested. This principle has important legal impact because it provides a record of what the provider relied on for clinical decision-making. For example, if a Record Entry was available in pending state and a clinician accessed the information to make decisions, it is important to retain the pending version even after the final version was available. Determining if the Record Entry was accessed for patient care may be challenging. Access logs should show if the information was accessed/viewed.			
1.	The system SHOULD provide the ability to manage the length of time a Record Entry can be in a pending or inactive state before being administratively closed.	RI.1.3.1	NC	EN
2.	The system MAY present a notification to the author or designate that a Record Entry will be administratively closed after a designated period of time.	RI.1.3.1	NC	EN
3.	The system MAY present pending Record Entries in accordance with the organization's business rules.	RI.1.3.1	NC	EN
4.	IF the system displays pending Record Entries, THEN the system SHALL tag and present that a Record Entry is pending or incomplete.	RI.1.3.1	NC	EN
5.	The system SHOULD provide the ability to update a Record Entry status to one of: - complete, - complete while retaining incomplete version of the Entry if viewed for patient care or used by the system, - mark as erroneous and retain if Entry used for patient care or by the system, or - discard if Entry never viewed for patient care purposes.	RI.1.3.1	NC	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
6.	The system SHOULD provide the ability to manage administrative closure of a Record Entry after a period of inactivity according to scope of practice, organizational policy, and/or jurisdictional law.	RI.1.3.1	NC	EN
7.	The system SHALL 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, conforming to function TI.2.1.1 (Record Entry Audit Triggers).	RI.1.3.1	NC	EN
RI.2 Function	Record Synchronization	RI.2	NC	EN
	Statement: Manage Record Synchronization **Description:** An EHR-S may consist of a set of components or applications; each application manages a subset of the health information. Therefore it is important that, through various interoperability mechanisms, an EHR-S maintains all the relevant information regarding the health record in synchrony. For example, if a physician orders an MRI, a set of diagnostic images and a radiology report will be created. As a result, the patient demographic information, the order for MRI, the diagnostic images associated with the order, and the report associated with the study must all be synchronized in order for the clinicians to receive a synchronized view the complete record (with respect to time and geographic location).Date and time need to be consistent across the applications that are part of the EHR system. Synchronization demonstrates a sequence and chain of events for reconstruction and is relevant during a legal proceeding. Maintenance of synchronization activities could be relevant during a legal proceeding. Note: Standards exist for Consistent Date and Time.			
1.	The system SHALL conform to function TI.5.1 (Application and Structured-Document Interchange Standards).	RI.2	NC	EN
2.	The system SHOULD conform to function TI.3 (Registry and Directory Services).	RI.2	NC	EN
3.	The system SHOULD provide the ability to link Record Entries to external information.	RI.2	NC	EN
4.	The system SHOULD store the location of each known Record Entry in order to enable authorized access to a complete logical health record if the EHR is distributed among several applications, services, or devices within the EHR-S.	RI.2	NC	EN
5.	The system SHALL provide the ability to manage date and time-related information between applications, components, services, systems, and devices.	RI.2	NC	EN
RI.3 Function	Record Archive and Restore	RI.3	NC	EN
	Statement: Manage Record Archive and Restore **Description:** EHR Record Entries must be transitioned over its lifecycle from online data structures to near-line or off-line data structures. The archive function performs this transition of Record Entries from an online, production EHR-S to offline storage for information that is not being purged/destroyed. The system must provide such archive and restore functions to extract and preserve indefinitely, Record Entries selected to be removed from the live production EHR-S database and retained. Record Entries must be archived and restored in such a manner as to permit them to be returned to their original or similar information structures. Archived Record Entries must also include corresponding metadata to ensure logical and semantic consistency of the information for subsequent access upon restoration. The archive function should provide both an automated, configurable capability as well as a user-invoked archival function to enable selected Record Entries to be preserved, or flagged for preservation. In the first instance, rules are specified to enable the system to conduct archiving in an unattended fashion. This is often the case for periodic system maintenance requirements (e.g., nightly processing where archival, data summarization and possibly purging of information occurs). In the second instance the system should provide the ability to select Record Entries to be preserved for future reference and access, such as in the case where selected Entries need to be preserved and retained for litigation. In restoring information, it may occur that Record Entries being restored are a subset of the Entries originally archived. For example, when all Record Entries for a patient encounter were archived and only a particular set of Record Entries related to a study or result are to be restored. The system may provide for such finer granularity of restoration. Archiving and restoring of Record Entries must be performed in a timely fashion, consistent with the operational requirements of both EHR users and system and technology capabilities. The system must enable compliance with records retention according to scope of practice, organizational policy or jurisdictional law.			
1.	The system SHALL provide the ability to archive and restore Record Entries according to scope of practice, organizational policy, and/or jurisdictional law (e.g., to/from off-line or near-line media).	RI.3	NC	EN
2.	The system SHALL provide the ability for an authorized user to tag and untag Record Entries to be archived.	RI.3	NC	EN
3.	The system SHALL provide the ability to archive or restore metadata that is associated with Record Entries that have been archived or restored.	RI.3	NC	EN
4.	The system SHOULD 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).	RI.3	NC	EN
5.	The system SHOULD provide the ability to tag Record Entries that will be retained or archived during the archival process.	RI.3	NC	EN
8.	The system SHALL provide the ability to manage (configure) archival parameters for Record Entries (e.g., what and when to archive).	RI.3	NC	EN

7. Trust Infrastructure Section

Section Overview

The Trust Infrastructure (TI) Section consists of functions common to an EHR System infrastructure, particularly those functions foundational to system operations, security, efficiency and data integrity assurance, safeguards for privacy and confidentiality, and interoperability with other systems. TI functions are core and foundational to all other functions of the Model (Care Provision, Care Provision Support, Population Health, Administrative Support and Record Infrastructure). Note extensive reference to TI functions in Overarching Criteria. TI functions may be implemented within the architecture of a single system or across a tightly coupled suite of systems (applications).All functions within the Trust Infrastructure Section have an identifier starting with "TI".

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
TI.1 Header	Security	TI.1	NC	EN
	Statement: Manage EHR-S security. **Description:** EHR-S security consists of entity authentication, entity authorization, entity access control, patient access management, secure data exchange, attestation, patient privacy and confidentiality. EHR audit functions are described in TI.2 .			
TI.1.1 Function	Entity Authentication	TI.1.1	NC	EN
	Statement: Authenticate EHR-S users, and/or entities before allowing access. **Description:** All entities accessing the EHR-S are subject to authentication. Examples of entity authentication, with varying levels of authentication rigor, include: - username/password; - digital certificate; - secure token; - biometrics.			
	1. The system SHALL authenticate entities (e.g., users, organizations, applications, components, objects, and/or devices) accessing EHR-S protected resources (e.g., functions and data) according to scope of practice, organizational policy, and/or jurisdictional law, using an authentication mechanism such as an accredited Standards Development Organization-approved authentication standard (e.g., SAML, WS-Trust, Kerberos), username/password, digital certificate, secure token, biometric, or hardware-specific addressing mechanism. (See also ISO 22600.)	TI.1.1	NC	EN
	2. The system SHALL manage authentication data/information securely (e.g., passwords or biometric data).	TI.1.1	NC	EN
	3. The system SHALL maintain configurable conditions and rules which protect against invalid, possibly malicious, authentication attempts according to organizational policy, and/or jurisdictional law (e.g., consecutive invalid logon attempts).	TI.1.1	NC	EN
	4. IF passwords are used to control access to the EHR-S, THEN the system SHALL provide the ability to maintain configurable timeframes (e.g., 180 days) for the reuse of passwords according to organizational policy, and/or jurisdictional law.	TI.1.1	NC	EN
	5. IF passwords are used to control access to the EHR-S, THEN the system SHALL provide the ability to maintain a configurable limit on the reuse of recently used passwords (e.g., the last 5 passwords) according to organizational policy, and/or jurisdictional law.	TI.1.1	NC	EN
	6. IF username/passwords are used to control access to the EHR-S, THEN the system SHALL maintain password strength rules (e.g., requiring a minimum number of characters and inclusion of alpha-numeric complexity).	TI.1.1	NC	EN
	7. IF passwords are used to control access to the system, THEN the system SHALL capture the password using obfuscation techniques (e.g., during user password entry) according to scope of practice, organizational policy, and/or jurisdictional law.	TI.1.1	NC	EN
	8. IF passwords are used to control access to the EHR-S, THEN the system SHALL manage password reset as an administrative function.	TI.1.1	NC	EN
	9. IF user passwords are initially set or later reset by an administrator, THEN the system SHALL provide the ability to update password at the next successful logon.	TI.1.1	NC	EN
	10. The system SHALL present limited feedback to the user during authentication.	TI.1.1	NC	EN
	11. The system SHALL provide the ability to enter case-insensitive 'usernames' that contain typeable alpha-numeric characters in support of ISO-646/ECMA-6 (aka US ASCII).	TI.1.1	NC	EN
	12. IF passwords are used, THEN the system SHALL provide the ability to enter case-sensitive passwords that contain typeable alpha-numeric characters in support of ISO-646/ECMA-6 (aka US ASCII).	TI.1.1	NC	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
TI.1.2 Function	Entity Authorization	TI.1.2	NC	EN
	Statement: Manage set(s) of EHR-S access control permissions. **Description:** Entities are authorized to use components of an EHR-S in accordance with their scope of practice within local policy or legal jurisdiction. Authorization rules provide a proper framework for establishing access permissions and privileges for the use of an EHR system, based on user, role or context. A combination of these authorization categories may be applied to control access to EHR-S resources (i.e., functions or data), including at the operating system level. - User based authorization refers to the permissions granted to access EHR-S resources based on the identity of an entity (e.g., user or software component). - Role based authorization refers to the permissions granted to access EHR-S resources based on the role of an entity. Examples of roles include: an application or device (tele-monitor or robotic); or a nurse, dietician, administrator, legal guardian, and auditor. - Context-based Authorization refers to the permissions granted to access EHR-S resources within a context, such as when a request occurs, explicit time, location, route of access, quality of authentication, work assignment, patient consents and authorization. See ISO 10181-3 Technical Framework for Access Control Standard. For example, an EHR-S might only allow supervising providers' context authorization to attest to entries proposed by residents under their supervision.			
	1. The system SHALL 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 scope of practice, organizational policy, and/or jurisdictional law.	TI.1.2	NC	EN
	2. The system SHALL conform to function TI.2 (Audit) to audit authorization actions as security events.	TI.1.2	NC	EN
	3. The system SHALL provide the ability to manage roles (e.g., clinician versus administrator) and contexts (e.g., legal requirements versus emergency situations) for authorization according to scope of practice, organizational policy, and/or jurisdictional law.	TI.1.2	NC	EN
	4. The system SHALL maintain a revision history of all entity record modifications.	TI.1.2	NC	EN
TI.1.3 Function	Entity Access Control	TI.1.3	NC	EN
	Statement: Manage access to EHR-S resources. **Description:** To ensure access is controlled, an EHR-S must authenticate and check authorization of entities for appropriate operations.			
	1. The system SHALL conform to function TI.1.1 (Entity Authentication).	TI.1.3	NC	EN
	2. The system SHALL conform to function TI.1.2 (Entity Authorization).	TI.1.3	NC	EN
	3. The system SHALL provide the ability to manage system and data access rules for all EHR-S resources according to scope of practice, organizational policy, and/or jurisdictional law.	TI.1.3	NC	EN
	4. The system SHALL manage the enforcement of authorizations to access EHR-S resources.	TI.1.3	NC	EN
	5. The system SHALL control access to EHR-S 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 organizational policy, and/or jurisdictional law.	TI.1.3	NC	EN
	6. The system SHOULD provide the ability to control-access to data, and/or functionality according to scope of practice, organizational policy, and/or jurisdictional law.	TI.1.3	NC	EN
	7. The system SHALL control-access to data, and/or functionality by using authentication mechanisms that comply with regulatory and policy guidelines (e.g.,by using a combination of Username and Password, Digital Certificates, Secure Tokens, and/or Biometrics).	TI.1.3	NC	EN
TI.1.4 Function	Patient Access Management	TI.1.4	NC	EN
	Statement: Manage a patient's access to personal health information. **Description:** A healthcare delivery organization will be able to manage a patient's ability to view his or her EHR based on organization policy or jurisdictional law. Typically, a patient or their legal representative (e.g., guardian, surrogate) has the right to view his or her EHR.			
	1. IF organizational policy allows patient access to the EHR-S, THEN the system SHALL conform to function TI.1.3 (Entity Access Control).	TI.1.4	NC	EN
	2. IF organizational policy allows patient access to the EHR-S, THEN the system SHALL conform to function TI.1.2 (Entity Authorization).	TI.1.4	NC	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
TI.1.5 Function	Non-Repudiation	TI.1.5	NC	EN

Statement: Limit an EHR-S user's ability to deny (repudiate) data origination, transmission or receipt by that user.

Description: An EHR-S allows data entry to a patient's electronic health record and it can be a sender or receiver of healthcare information. Non-repudiation is a way to guarantee that the source of the data/record cannot later deny that fact; and that the sender of a message cannot later deny having sent the message; and that the recipient cannot deny having received the message. Components of non-repudiation can include:

- Digital signature, which serves as a unique identifier for an individual (much like a written signature);

- Confirmation service, which utilizes a message transfer agent to create a digital receipt (providing confirmation that a message was sent, and/or received);

- Timestamp, which proves that a document existed at a certain date and time;

- The use of standardized timekeeping protocols (e.g., the Integrating the Healthcare Enterprise (IHE) Consistent Time Profile).

1. The system SHALL capture the identity of the entity taking the action according to scope of practice, organizational policy, and/or jurisdictional law.	TI.1.5	NC	EN
2. The system SHALL capture time stamp of the initial entry, modification and exchange of data according to scope of practice, organizational policy, and/or jurisdictional law.	TI.1.5	NC	EN
3. The system SHALL conform to function TI.2 (Audit) to prevent repudiation of data origination, transmission and receipt according to scope of practice, organizational policy, and/or jurisdictional law.	TI.1.5	NC	EN
4. The system SHOULD conform to function RI.1.1.4 (Attest Record Entry Content) to ensure integrity of data and data exchange and thus prevent repudiation of data origination, transmission or receipt according to scope of practice, organizational policy, and/or jurisdictional law.	TI.1.5	NC	EN

TI.1.6 Function	Secure Data Exchange	TI.1.6	NC	EN

Statement: Secure all modes of EHR data exchange.

Description: Whenever an exchange of EHR information occurs, it requires appropriate security and privacy considerations, including data obfuscation as well as both destination and source authentication when necessary. For example, it may be necessary to encrypt data sent to remote or external destinations.

1. The system SHALL secure all modes of EHR data exchange.	TI.1.6	NC	EN
2. The system SHALL conform to function TI.1.7 (Secure Data Routing).	TI.1.6	NC	EN
3. The system SHOULD provide the ability to de-identify data.	TI.1.6	NC	EN
4. The system SHALL encrypt and decrypt EHR data that is exchanged over a non-secure link.	TI.1.6	NC	EN
5. IF encryption is used, THEN the system SHALL exchange data using recognized standards-based encryption mechanisms according to organizational policy, and/or jurisdictional law.	TI.1.6	NC	EN
6. IF the EHR-S is the recipient of a secure data exchange, THEN the system SHOULD provide the ability to transmit an acknowledgment of the receipt of the data.	TI.1.6	NC	EN
7. The system SHALL provide the ability to determine static or dynamic addresses for known and authorized sources and destinations.	TI.1.6	NC	EN

TI.1.7 Function	Secure Data Routing	TI.1.7	NC	EN

Statement: Route electronically exchanged EHR data only to/from known and authenticated destinations/sources (according to applicable healthcare-specific rules and relevant standards).

Description: An EHR-S needs to ensure that it is exchanging EHR information with the entities (applications, institutions, directories) it expects. This function depends on entity authorization and authentication to be available in the system. For example, a physician practice management application in an EHR-S might send claim attachment information to an external entity. To accomplish this, the application must use a secure routing method, which ensures that both the sender and receiving sides are authorized to engage in the information exchange. Known sources and destinations can be established in a static setup or they can be dynamically determined. Examples of a static setup are recordings of IP (Internet Protocol) addresses or recordings of DNS (Domain Name System) names. For dynamic determination of known sources and destinations, systems can use authentication mechanisms as described in TI.1. For example, the sending of a laboratory order from the EHR-S to a laboratory system within the same organization usually uses a simple static setup for routing. In contrast, sending a laboratory order to a reference laboratory outside of the organization will involve some kind of authentication process. Provision of a secure network infrastructure is beyond the scope of an EHR-S.

1. The system SHALL conform to function TI.1.1 (Entity Authentication) to exchange EHR data only to and from known, authenticated sources and destinations.	TI.1.7	NC	EN
2. The system SHALL conform to function TI.2 (Audit) to capture audit information about changes to the status of sources and destinations.	TI.1.7	NC	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
TI.1.8 Function	Patient Privacy and Confidentiality	TI.1.8	NC	EN
	Statement: Enable the enforcement of the applicable jurisdictional and organizational patient privacy rules as they apply to various parts of an EHR-S through the implementation of security mechanisms. **Description:** Patients' privacy and the confidentiality of EHRs are violated if access to EHRs occurs without authorization. Violations or potential violations can impose tangible economic or social losses on affected patients, as well as less tangible feelings of vulnerability and pain. Fear of potential violations discourages patients from revealing sensitive personal information that may be relevant to diagnostic and treatment services. Rules for the protection of privacy and confidentiality may vary depending upon the vulnerability of patients and the sensitivity of records. Strongest protections should apply to the records of minors and the records of patients with stigmatized conditions. Authorization to access the most sensitive parts of an EHR is most definitive if made by the explicit and specific consent of the patient. Please see the definition of masking in the glossary. Organizational practices related to privacy and security jurisdictional laws could be called into question during a legal proceeding. Adherence to applicable laws supports the credibility and trustworthiness of the organization.			
	1. The system SHALL provide the ability to maintain compliance with requirements for patient privacy and confidentiality according to scope of practice, organizational policy, and/or jurisdictional law (e.g., US HIPAA Privacy Rules, US Federal Conditions of Participation for Medicare/Medicaid Providers).	TI.1.8	NC	EN
	2. The system SHALL conform to function TI.1.1 (Entity Authentication).	TI.1.8	NC	EN
	3. The system SHALL conform to function TI.1.2 (Entity Authorization).	TI.1.8	NC	EN
	4. The system SHALL conform to function TI.1.3 (Entity Access Control).	TI.1.8	NC	EN
	5. The system SHALL conform to function TI.1.5 (Non-Repudiation).	TI.1.8	NC	EN
	6. The system SHALL conform to function TI.1.6 (Secure Data Exchange).	TI.1.8	NC	EN
	7. The system SHALL conform to function TI.2 (Audit).	TI.1.8	NC	EN
	8. The system SHALL provide the ability to maintain varying levels of confidentiality according to patient preferences, user role, scope of practice, organizational policy, and/or jurisdictional law.	TI.1.8	NC	EN
	9. The system SHALL provide the ability to mask parts of the electronic health record (e.g., medications, conditions, sensitive documents) from disclosure according to patient preferences, user role, scope of practice, organizational policy, and/or jurisdictional law.	TI.1.8	NC	EN
	10. The system SHALL provide the ability to unmask (override a mask) in emergency or other specific situations in accordance with users' role, and according to scope of practice, organizational policy, and/or jurisdictional law.	TI.1.8	NC	EN
	11. The system SHOULD provide the ability to maintain indicators (flags) to health record users that content has been masked in accordance with users' role, and according to scope of practice, organizational policy, and/or jurisdictional law.	TI.1.8	NC	EN
	12. IF the system allows a user to unmask (override a mask) in an emergency or other specific situation, THEN the system SHALL provide the ability to capture the reason for unmasking or overriding the mask.	TI.1.8	NC	EN
	13. The system SHALL provide the ability to manage patient consents to, or restrictions against, any access to data.	TI.1.8	NC	EN
	14. The system SHALL provide the ability to manage a privacy policy according to patient preferences, user role, scope of practice, organizational policy, and/or jurisdictional law.	TI.1.8	NC	EN
	15. The system SHALL 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, scope of practice, organizational policy, and/or jurisdictional law.	TI.1.8	NC	EN
TI.2 Function	Audit	TI.2	NC	EN
	Statement: Audit Key Record, Security, System and Clinical Events **Description:** EHR Systems have built in audit triggers to capture key events in real-time, including events related to record management, security, system operations or performance or clinical situations. Event details, including key metadata (who, what, when, where), are captured in an Audit Log. Audit Review functions allow various methods of critical event notification as well as routine log review. Audit functions implement requirements according to scope of practice, organizational policy, and jurisdictional law.			
	1. The system SHALL conform to function TI.1.3 (Entity Access Control) to limit access to, or modification of, audit record information to appropriate entities according to scope of practice, organizational policy, and/or jurisdictional law.	TI.2	NC	EN
	2. The system SHALL conform to function TI.1.3 (Entity Access Control) to limit access to audit record information for purposes of deletion according to scope of practice, organizational policy, and/or jurisdictional law (e.g., limit access to only allow a specific system administrator to delete audit record information).	TI.2	NC	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
TI.2.1 Function	Audit Triggers	TI.2.1	NC	EN
	Statement: Manage Audit Triggers **Description:** EHR Systems have built in audit triggers to capture key events in real-time. Audit triggers signal key: - 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. - Clinical events with special log requirements.			
	1. The system SHALL audit key events, as specified in function TI.2.1 (Audit Triggers) and child functions, according to scope of practice, organizational policy, and/or jurisdictional law.	TI.2.1	NC	EN
	2. The system SHALL capture key Audit Metadata at each Audit Trigger, as specified in TI.2.1 (Audit Triggers) and child functions, according to scope of practice, organizational policy, and/or jurisdictional law.	TI.2.1	NC	EN
	3. The system SHALL capture an Audit Log Entry at each Audit Trigger as specified in TI.2.1 (Audit Triggers) according to scope of practice, organizational policy, and/or jurisdictional law.	TI.2.1	NC	EN
	4. The system SHALL capture the current master clock time to establish valid record date and time metadata.	TI.2.1	NC	EN
TI.2.1.1 Function	Record Entry Audit Triggers	TI.2.1.1	NC	EN
	Statement: Manage Record Entry Audit Triggers **Description:** Record Entries are managed throughout their lifespan at various points in their lifecycle. Record Entry Audit Triggers are designed to capture Record Entry related events including key metadata (who, what, when, where, why). See Function RI.1 , Record Lifecycle.			
	1. The system SHALL conform to function RI.1 (Record Lifecycle) and its RI.1.x.1 Subsections to capture and maintain Record Entry Audit Metadata.	TI.2.1.1	NC	EN
	2. The system SHALL link an Audit Log Entry to each Record Entry according to scope of practice, organizational policy, and/or jurisdictional law.	TI.2.1.1	NC	EN
	3. The system SHALL harmonize Audit Log Entry Metadata and corresponding Record Entry Metadata to ensure they remain identical.	TI.2.1.1	NC	EN
TI.2.1.2 Function	Security Audit Triggers	TI.2.1.2	NC	EN
	Statement: Manage Security Audit Triggers **Description:** Security Audit Triggers are designed to capture security related events, both routine and exceptional, including key metadata (who, what, when, where, why).			
	1. The system SHALL provide the ability to enter the reason that access control functions are being overridden.	TI.2.1.2	NC	EN
	2. The system SHALL audit key events according to scope of practice, organizational policy, and/or jurisdictional law.	TI.2.1.2	NC	EN
	3. The system SHALL capture key Audit Metadata at each Audit Trigger according to scope of practice, organizational policy, and/or jurisdictional law.	TI.2.1.2	NC	EN
	4. The system SHALL capture an Audit Log Entry at each Audit Trigger according to scope of practice, organizational policy, and/or jurisdictional law.	TI.2.1.2	NC	EN
	5. The system SHALL provide the ability to log system maintenance events for entry to, and exit from, the EHR system.	TI.2.1.2	NC	EN
TI.2.1.2.1 Function	Security Event Security Audit Trigger	TI.2.1.2.1	NC	EN
	Statement: Manage Audit Trigger initiated to track Security event. **Description:** Capture security events, both routine and exceptional, including key metadata (who, what, when, where, why).			
	1. The system SHALL audit each occurrence when security events are detected according to scope of practice, organizational policy, and/or jurisdictional law.	TI.2.1.2.1	NC	EN
	2. The system SHALL capture identity of the organization.	TI.2.1.2.1	NC	EN
	3. IF known, THEN the system SHALL capture identity of the user.	TI.2.1.2.1	NC	EN
	4. The system SHALL capture identity of the system.	TI.2.1.2.1	NC	EN
	5. The system SHALL capture the event initiating audit trigger.	TI.2.1.2.1	NC	EN
	6. The system SHALL capture the date and time of the event initiating audit trigger.	TI.2.1.2.1	NC	EN
	7. The system SHALL capture identity of the location (i.e., network address).	TI.2.1.2.1	NC	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
TI.2.1.2.2 Function	User Authentication to the System (Start user session) Security Audit Trigger	TI.2.1.2.2	NC	EN
	Statement: Manage Audit Trigger initiated to track user authentication to the system (start user session). **Description:** Capture user authentication to the system (start user session), both routine and exceptional, including key metadata (who, what, when, where, why).			
	1. The system SHALL audit each occurrence of user authentication at logon (start session).	TI.2.1.2.2	NC	EN
	2. The system SHALL capture identity of the organization.	TI.2.1.2.2	NC	EN
	3. IF known, THEN the system SHALL capture identity of the user.	TI.2.1.2.2	NC	EN
	4. The system SHALL capture identity of the system.	TI.2.1.2.2	NC	EN
	5. The system SHALL capture the event initiating audit trigger.	TI.2.1.2.2	NC	EN
	6. The system SHALL capture the date and time of the event initiating audit trigger.	TI.2.1.2.2	NC	EN
	7. The system SHALL capture identity of the location (i.e., network address).	TI.2.1.2.2	NC	EN
	8. The system SHALL capture the method of user authentication (e.g., user ID, password, biometrics, token, security question(s)).	TI.2.1.2.2	NC	EN
TI.2.1.2.3 Function	User Authentication (System Prompt for Password Change) Security Audit Trigger	TI.2.1.2.3	NC	EN
	Statement: Manage Audit Trigger initiated to track user authentication (system prompt for password change). **Description:** Capture user authentication (system prompt for password change), both routine and exceptional, including key metadata (who, what, when, where, why).			
	1. The system SHALL audit each occurrence of user authentication when user is prompted to change password.	TI.2.1.2.3	NC	EN
	2. The system SHALL capture identity of the organization.	TI.2.1.2.3	NC	EN
	3. IF known, THEN the system SHALL capture identity of the user.	TI.2.1.2.3	NC	EN
	4. The system SHALL capture the identity of the system.	TI.2.1.2.3	NC	EN
	5. The system SHALL capture the event initiating audit trigger.	TI.2.1.2.3	NC	EN
	6. The system SHALL capture the date and time of the event initiating audit trigger.	TI.2.1.2.3	NC	EN
	7. The system SHALL capture identity of the location (i.e., network address).	TI.2.1.2.3	NC	EN
	8. IF password change successful, THEN the system SHALL capture the new password.	TI.2.1.2.3	NC	EN
TI.2.1.2.4 Function	User Request to Change Password Security Audit Trigger	TI.2.1.2.4	NC	EN
	Statement: Manage Audit Trigger initiated to track user request to change password. **Description:** Capture user request to change password, both routine and exceptional, including key metadata (who, what, when, where, why).			
	1. The system SHALL audit each occurrence of user authentication when user requests password change.	TI.2.1.2.4	NC	EN
	2. The system SHALL capture identity of the organization.	TI.2.1.2.4	NC	EN
	3. IF known, THEN the system SHALL capture identity of the user.	TI.2.1.2.4	NC	EN
	4. The system SHALL capture identity of the system.	TI.2.1.2.4	NC	EN
	5. The system SHALL capture the event initiating audit trigger.	TI.2.1.2.4	NC	EN
	6. The system SHALL capture the date and time of the event initiating audit trigger.	TI.2.1.2.4	NC	EN
	7. The system SHALL capture identity of the location (i.e., network address).	TI.2.1.2.4	NC	EN
	9. IF password change successful, THEN the system SHALL capture the new password.	TI.2.1.2.4	NC	EN
TI.2.1.2.5 Function	User Log Out (End user session) Security Audit Trigger	TI.2.1.2.5	NC	EN
	Statement: Manage Audit Trigger initiated to track user log out (end user session). **Description:** Capture user log out (end user session), both routine and exceptional, including key metadata (who, what, when, where, why).			
	1. The system SHALL audit each occurrence of user logout (end session).	TI.2.1.2.5	NC	EN
	2. The system SHALL capture identity of the organization.	TI.2.1.2.5	NC	EN
	3. IF known, THEN the system SHALL capture identity of the user.	TI.2.1.2.5	NC	EN
	4. The system SHALL capture identity of the system.	TI.2.1.2.5	NC	EN
	5. The system SHALL capture the event initiating audit trigger.	TI.2.1.2.5	NC	EN
	6. The system SHALL capture the date and time of the event initiating audit trigger.	TI.2.1.2.5	NC	EN
	7. The system SHALL capture identity of the location (i.e., network address).	TI.2.1.2.5	NC	EN

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TI.2.1.2.6 Function	User Access (Successful) Security Audit Trigger	TI.2.1.2.6	NC	EN
Statement: Manage Audit Trigger initiated to track user access (successful). **Description:** Capture user access (successful), both routine and exceptional, including key metadata (who, what, when, where, why).				
1. The system SHALL audit each occurrence when user access is successful.		TI.2.1.2.6	NC	EN
2. The system SHALL capture identity of the organization.		TI.2.1.2.6	NC	EN
3. IF known, THEN the system SHALL capture identity of the user.		TI.2.1.2.6	NC	EN
4. The system SHALL capture identity of the system.		TI.2.1.2.6	NC	EN
5. The system SHALL capture the event initiating audit trigger.		TI.2.1.2.6	NC	EN
6. The system SHALL capture the date and time of the event initiating audit trigger.		TI.2.1.2.6	NC	EN
7. The system SHALL capture identity of the location (i.e., network address).		TI.2.1.2.6	NC	EN
TI.2.1.2.7 Function	User Attempts to Access Data (Unsuccessful – Access Denied) Security Audit Trigger	TI.2.1.2.7	NC	EN
Statement: Manage Audit Trigger initiated to track user attempts to access data (unsuccessful – access denied). **Description:** Capture user attempts to access data (unsuccessful – access denied), both routine and exceptional, including key metadata (who, what, when, where, why).				
1. The system SHALL audit each occurrence when user access is unsuccessful (denied).		TI.2.1.2.7	NC	EN
2. The system SHALL capture identity of the organization.		TI.2.1.2.7	NC	EN
3. IF known, THEN the system SHALL capture identity of the user.		TI.2.1.2.7	NC	EN
4. The system SHALL capture identity of the system.		TI.2.1.2.7	NC	EN
5. The system SHALL capture the event initiating audit trigger.		TI.2.1.2.7	NC	EN
6. The system SHALL capture the date and time of the event initiating audit trigger.		TI.2.1.2.7	NC	EN
7. The system SHALL capture identity of the location (i.e., network address).		TI.2.1.2.7	NC	EN
TI.2.1.2.8 Function	Extraordinary User Access (Break the Glass) Security Audit Trigger	TI.2.1.2.8	NC	EN
Statement: Manage Audit Trigger initiated to track extraordinary user access (break the glass). **Description:** Capture extraordinary user access (break the glass), both routine and exceptional, including key metadata (who, what, when, where, why).				
1. The system SHALL audit each occurrence when extraordinary access is successful (e.g., "break the glass" scenario).		TI.2.1.2.8	NC	EN
2. The system SHALL capture identity of the organization.		TI.2.1.2.8	NC	EN
3. IF known, THEN the system SHALL capture identity of the user.		TI.2.1.2.8	NC	EN
4. The system SHALL capture identity of the system.		TI.2.1.2.8	NC	EN
5. The system SHALL capture the event initiating audit trigger.		TI.2.1.2.8	NC	EN
6. The system SHALL capture the date and time of the event initiating audit trigger.		TI.2.1.2.8	NC	EN
7. The system SHALL capture identity of the location (i.e., network address).		TI.2.1.2.8	NC	EN
8. The system SHALL capture the rationale for extraordinary user access.		TI.2.1.2.8	NC	EN
TI.2.1.2.9 Function	User Permissions (Authorization) Security Audit Trigger	TI.2.1.2.9	NC	EN
Statement: Manage Audit Trigger initiated to track user permissions (authorization). **Description:** Capture user permissions (authorization), both routine and exceptional, including key metadata (who, what, when, where, why).				
1. The system SHALL audit each occurrence when user permissions (authorizations) are granted, removed or updated.		TI.2.1.2.9	NC	EN
2. The system SHALL capture identity of the organization.		TI.2.1.2.9	NC	EN
3. IF known, THEN the system SHALL capture identity of the user.		TI.2.1.2.9	NC	EN
4. The system SHALL capture identity of the system.		TI.2.1.2.9	NC	EN
5. The system SHALL capture the event initiating audit trigger.		TI.2.1.2.9	NC	EN
6. The system SHALL capture the date and time of the event initiating audit trigger.		TI.2.1.2.9	NC	EN
7. The system SHALL capture identity of the location (i.e., network address).		TI.2.1.2.9	NC	EN
9. The system SHALL capture identity of user to whom permissions apply.		TI.2.1.2.9	NC	EN
10. The system SHALL capture the new set of applicable user permissions (authorizations).		TI.2.1.2.9	NC	EN

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TI.2.1.3 Function	System Audit Triggers	TI.2.1.3	NC	EN
	Statement: Manage System Audit Triggers **Description:** System Audit Triggers are designed to capture system related events, both routine and exceptional, including key metadata (who, what, when, where, why).			
	5. The system SHALL provide the ability to audit the access and usage of systems, data, and organizational resources.	TI.2.1.3	NC	EN
	6. The system SHALL provide the ability to log system events at the hardware and software architecture level.	TI.2.1.3	NC	EN
	7. The system SHALL provide the ability to log system maintenance events for entry to, and exit from, the EHR system.	TI.2.1.3	NC	EN
	8. The system SHALL provide the ability to log system maintenance events for remote access connections including those for system support and maintenance activities for security and access purposes.	TI.2.1.3	NC	EN
TI.2.1.3.1 Function	System Event System Audit Trigger	TI.2.1.3.1	NC	EN
	Statement: Manage Audit Trigger initiated to track system events. **Description:** Capture system events, both routine and exceptional, including key metadata (who, what, when, where, why).			
	1. The system SHALL audit each occurrence when system events are detected according to scope of practice, organizational policy, and/or jurisdictional law.	TI.2.1.3.1	NC	EN
	2. The system SHALL capture identity of the organization.	TI.2.1.3.1	NC	EN
	3. IF known, THEN the system SHALL capture identity of the user.	TI.2.1.3.1	NC	EN
	4. The system SHALL capture identity of the system.	TI.2.1.3.1	NC	EN
	5. The system SHALL capture the event initiating audit trigger.	TI.2.1.3.1	NC	EN
	6. The system SHALL capture the date and time of the event initiating audit trigger.	TI.2.1.3.1	NC	EN
	7. The system SHALL capture identity of the location (i.e., network address).	TI.2.1.3.1	NC	EN
TI.2.1.3.2 Function	System Started System Audit Trigger	TI.2.1.3.2	NC	EN
	Statement: Manage Audit Trigger initiated to track system started event. **Description:** Capture system started event, both routine and exceptional, including key metadata (who, what, when, where, why).			
	1. The system SHALL audit each occurrence when system started.	TI.2.1.3.2	NC	EN
	2. The system SHALL capture identity of the organization.	TI.2.1.3.2	NC	EN
	3. IF known, THEN the system SHALL capture identity of the user.	TI.2.1.3.2	NC	EN
	4. The system SHALL capture identity of the system.	TI.2.1.3.2	NC	EN
	5. The system SHALL capture the event initiating audit trigger.	TI.2.1.3.2	NC	EN
	6. The system SHALL capture the date and time of the event initiating audit trigger.	TI.2.1.3.2	NC	EN
	7. The system SHALL capture identity of the location (i.e., network address).	TI.2.1.3.2	NC	EN
TI.2.1.3.3 Function	Back Up Started System Audit Trigger	TI.2.1.3.3	NC	EN
	Statement: Manage Audit Trigger initiated to track back-up started event. **Description:** Capture back-up started event, both routine and exceptional, including key metadata (who, what, when, where, why).			
	1. The system SHALL audit each occurrence when database backup is initiated.	TI.2.1.3.3	NC	EN
	2. The system SHALL capture identity of the organization.	TI.2.1.3.3	NC	EN
	3. IF known, THEN the system SHALL capture identity of the user.	TI.2.1.3.3	NC	EN
	4. The system SHALL capture identity of the system.	TI.2.1.3.3	NC	EN
	5. The system SHALL capture the event initiating audit trigger.	TI.2.1.3.3	NC	EN
	6. The system SHALL capture the date and time of the event initiating audit trigger.	TI.2.1.3.3	NC	EN
	7. The system SHALL capture identity of the location (i.e., network address).	TI.2.1.3.3	NC	EN
TI.2.1.3.4 Function	Back Up Completed System Audit Trigger	TI.2.1.3.4	NC	EN
	Statement: Manage Audit Trigger initiated to track back-up completed event. **Description:** Capture back-up completed event, both routine and exceptional, including key metadata (who, what, when, where, why).			
	1. The system SHALL audit each occurrence when database backup is completed.	TI.2.1.3.4	NC	EN
	2. The system SHALL capture identity of the organization.	TI.2.1.3.4	NC	EN
	3. IF known, THEN the system SHALL capture identity of the user.	TI.2.1.3.4	NC	EN
	4. The system SHALL capture identity of the system.	TI.2.1.3.4	NC	EN

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5. The system SHALL capture the event initiating audit trigger.		TI.2.1.3.4	NC	EN
6. The system SHALL capture the date and time of the event initiating audit trigger.		TI.2.1.3.4	NC	EN
7. The system SHALL capture identity of the location (i.e., network address).		TI.2.1.3.4	NC	EN
8. The system SHALL capture backup success or failure.		TI.2.1.3.4	NC	EN
TI.2.1.3.5 Function	Back Up Recovery Started System Audit Trigger	TI.2.1.3.5	NC	EN
Statement: Manage Audit Trigger initiated to track back-up recovery started event. **Description:** Capture back-up recovery started event, both routine and exceptional, including key metadata (who, what, when, where, why).				
1. The system SHALL audit each occurrence when database recovery is initiated.		TI.2.1.3.5	NC	EN
2. The system SHALL capture identity of the organization.		TI.2.1.3.5	NC	EN
3. IF known, THEN the system SHALL capture identity of the user.		TI.2.1.3.5	NC	EN
4. The system SHALL capture identity of the system.		TI.2.1.3.5	NC	EN
5. The system SHALL capture the event initiating audit trigger.		TI.2.1.3.5	NC	EN
6. The system SHALL capture the date and time of the event initiating audit trigger.		TI.2.1.3.5	NC	EN
7. The system SHALL capture identity of the location (i.e., network address).		TI.2.1.3.5	NC	EN
TI.2.1.3.6 Function	Back Up Recovery Completed System Audit Trigger	TI.2.1.3.6	NC	EN
Statement: Manage Audit Trigger initiated to track back-up recovery completed event. **Description:** Capture back-up recovery completed event, both routine and exceptional, including key metadata (who, what, when, where, why).				
1. The system SHALL audit each occurrence when database recovery is completed.		TI.2.1.3.6	NC	EN
2. The system SHALL capture identity of the organization.		TI.2.1.3.6	NC	EN
3. IF known, THEN the system SHALL capture identity of the user.		TI.2.1.3.6	NC	EN
4. The system SHALL capture identity of the system.		TI.2.1.3.6	NC	EN
5. The system SHALL capture the event initiating audit trigger.		TI.2.1.3.6	NC	EN
6. The system SHALL capture the date and time of the event initiating audit trigger.		TI.2.1.3.6	NC	EN
7. The system SHALL capture identity of the location (i.e., network address).		TI.2.1.3.6	NC	EN
8. The system SHALL capture backup recovery success or failure.		TI.2.1.3.6	NC	EN
TI.2.1.3.7 Function	Batch Job Started System Audit Trigger	TI.2.1.3.7	NC	EN
Statement: Manage Audit Trigger initiated to track batch job started event. **Description:** Capture system batch job started event, both routine and exceptional, including key metadata (who, what, when, where, why).				
1. The system SHALL audit each occurrence when a batch job is initiated.		TI.2.1.3.7	NC	EN
2. The system SHALL capture identity of the organization.		TI.2.1.3.7	NC	EN
3. IF known, THEN the system SHALL capture identity of the user.		TI.2.1.3.7	NC	EN
4. The system SHALL capture identity of the system.		TI.2.1.3.7	NC	EN
5. The system SHALL capture the event initiating audit trigger.		TI.2.1.3.7	NC	EN
6. The system SHALL capture the date and time of the event initiating audit trigger.		TI.2.1.3.7	NC	EN
7. The system SHALL capture identity of the location (i.e., network address).		TI.2.1.3.7	NC	EN
TI.2.1.3.8 Function	Batch Job Completed System Audit Trigger	TI.2.1.3.8	NC	EN
Statement: Manage Audit Trigger initiated to track batch job completed event. **Description:** Capture batch job completed event, both routine and exceptional, including key metadata (who, what, when, where, why).				
1. The system SHALL audit each occurrence when a batch job is completed.		TI.2.1.3.8	NC	EN
2. The system SHALL capture identity of the organization.		TI.2.1.3.8	NC	EN
3. IF known, THEN the system SHALL capture identity of the user.		TI.2.1.3.8	NC	EN
4. The system SHALL capture identity of the system.		TI.2.1.3.8	NC	EN
5. The system SHALL capture the event initiating audit trigger.		TI.2.1.3.8	NC	EN
6. The system SHALL capture the date and time of the event initiating audit trigger.		TI.2.1.3.8	NC	EN
7. The system SHALL capture identity of the location (i.e., network address).		TI.2.1.3.8	NC	EN

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TI.2.1.3.9 Function	Maintenance Started System Audit Trigger	TI.2.1.3.9	NC	EN
Statement: Manage Audit Trigger initiated to track maintenance started event. **Description:** Capture maintenance started event, both routine and exceptional, including key metadata (who, what, when, where, why).				
1. The system SHALL audit each occurrence when maintenance is initiated, including down time.		TI.2.1.3.9	NC	EN
2. The system SHALL capture identity of the organization.		TI.2.1.3.9	NC	EN
3. IF known, THEN the system SHALL capture identity of the user.		TI.2.1.3.9	NC	EN
4. The system SHALL capture identity of the system.		TI.2.1.3.9	NC	EN
5. The system SHALL capture the event initiating audit trigger.		TI.2.1.3.9	NC	EN
6. The system SHALL capture the date and time of the event initiating audit trigger.		TI.2.1.3.9	NC	EN
7. The system SHALL capture identity of the location (i.e., network address).		TI.2.1.3.9	NC	EN
TI.2.1.3.10 Function	Maintenance Completed System Audit Trigger	TI.2.1.3.10	NC	EN
Statement: Manage Audit Trigger initiated to track maintenance completed event. **Description:** Capture maintenance completed event, both routine and exceptional, including key metadata (who, what, when, where, why).				
1. The system SHALL audit each occurrence when maintenance is completed, including restart from down time.		TI.2.1.3.10	NC	EN
2. The system SHALL capture identity of the organization.		TI.2.1.3.10	NC	EN
3. IF known, THEN the system SHALL capture identity of the user.		TI.2.1.3.10	NC	EN
4. The system SHALL capture identity of the system.		TI.2.1.3.10	NC	EN
5. The system SHALL capture the event initiating audit trigger.		TI.2.1.3.10	NC	EN
6. The system SHALL capture the date and time of the event initiating audit trigger.		TI.2.1.3.10	NC	EN
7. The system SHALL capture identity of the location (i.e., network address).		TI.2.1.3.10	NC	EN
TI.2.1.3.11 Function	Resource Usage System Audit Trigger	TI.2.1.3.11	NC	EN
Statement: Manage Audit Trigger initiated to track resource usage event. **Description:** Capture resource usage event, both routine and exceptional, including key metadata (who, what, when, where, why).				
1. The system SHALL audit usage of system resources (access, computational, storage, network) according to scope of practice, organizational policy, and/or jurisdictional law.		TI.2.1.3.11	NC	EN
2. The system SHALL capture identity of the organization.		TI.2.1.3.11	NC	EN
3. IF known, THEN the system SHALL capture identity of the user.		TI.2.1.3.11	NC	EN
4. The system SHALL capture identity of the system.		TI.2.1.3.11	NC	EN
5. The system SHALL capture the event initiating audit trigger.		TI.2.1.3.11	NC	EN
6. The system SHALL capture the date and time of the event initiating audit trigger.		TI.2.1.3.11	NC	EN
7. The system SHALL capture identity of the location (i.e., network address).		TI.2.1.3.11	NC	EN
TI.2.1.3.12 Function	System Maintenance Events -Local Access System Audit Trigger	TI.2.1.3.12	NC	EN
Statement: Manage Audit Trigger initiated to track system maintenance events -local access. **Description:** Capture system maintenance events -local access, both routine and exceptional, including key metadata (who, what, when, where, why).				
1. The system SHALL audit each occurrence of a system maintenance event with local access.		TI.2.1.3.12	NC	EN
2. The system SHALL capture identity of the organization.		TI.2.1.3.12	NC	EN
3. IF known, THEN the system SHALL capture identity of the user.		TI.2.1.3.12	NC	EN
4. The system SHALL capture identity of the system.		TI.2.1.3.12	NC	EN
5. The system SHALL capture the event initiating audit trigger.		TI.2.1.3.12	NC	EN
6. The system SHALL capture the date and time of the event initiating audit trigger.		TI.2.1.3.12	NC	EN
7. The system SHALL capture identity of the location (i.e., network address).		TI.2.1.3.12	NC	EN
TI.2.1.3.13 Function	System Maintenance Events - Remote Access System Audit Trigger	TI.2.1.3.13	NC	EN
Statement: Manage Audit Trigger initiated to track system maintenance events -remote access. **Description:** Capture system maintenance events -remote access, both routine and exceptional, including key metadata (who, what, when, where, why).				
1. The system SHALL audit each occurrence of a system maintenance event with remote access.		TI.2.1.3.13	NC	EN
2. The system SHALL capture identity of the organization.		TI.2.1.3.13	NC	EN
3. IF known, THEN the system SHALL capture identity of the user.		TI.2.1.3.13	NC	EN

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4. The system SHALL capture identity of the system.		TI.2.1.3.13	NC	EN
5. The system SHALL capture the event initiating audit trigger.		TI.2.1.3.13	NC	EN
6. The system SHALL capture the date and time of the event initiating audit trigger.		TI.2.1.3.13	NC	EN
7. The system SHALL capture identity of the location (i.e., network address).		TI.2.1.3.13	NC	EN
TI.2.1.3.14 Function	System Maintenance - EHR or Clinical Software System Audit Trigger	TI.2.1.3.14	NC	EN
Statement: Manage Audit Trigger initiated to track system maintenance - EHR or clinical software. **Description:** Capture system maintenance - EHR or clinical software, both routine and exceptional, including key metadata (who, what, when, where, why).				
1. The system SHALL audit each occurrence of a system maintenance event when EHR or clinical software is updated or re-configured.		TI.2.1.3.14	NC	EN
2. The system SHALL capture identity of the organization.		TI.2.1.3.14	NC	EN
3. IF known, THEN the system SHALL capture identity of the user.		TI.2.1.3.14	NC	EN
4. The system SHALL capture identity of the system.		TI.2.1.3.14	NC	EN
5. The system SHALL capture the event initiating audit trigger.		TI.2.1.3.14	NC	EN
6. The system SHALL capture the date and time of the event initiating audit trigger.		TI.2.1.3.14	NC	EN
7. The system SHALL capture identity of the location (i.e., network address).		TI.2.1.3.14	NC	EN
TI.2.1.3.15 Function	System Maintenance - Codes, Vocabulary, Knowledge, Rules System Audit Trigger	TI.2.1.3.15	NC	EN
Statement: Manage Audit Trigger initiated to track system maintenance of codes, vocabulary, knowledge and rules. **Description:** Capture system maintenance of codes, vocabulary, knowledge and rules - both routine and exceptional, including key metadata (who, what, when, where, why).				
1. The system SHALL audit each occurrence of a system maintenance event when codes, classification schemes, knowledge bases, clinical or business practice rules are updated or re-configured.		TI.2.1.3.15	NC	EN
2. The system SHALL capture identity of the organization.		TI.2.1.3.15	NC	EN
3. IF known, THEN the system SHALL capture identity of the user.		TI.2.1.3.15	NC	EN
4. The system SHALL capture identity of the system.		TI.2.1.3.15	NC	EN
5. The system SHALL capture the event initiating audit trigger.		TI.2.1.3.15	NC	EN
6. The system SHALL capture the date and time of the event initiating audit trigger.		TI.2.1.3.15	NC	EN
7. The system SHALL capture identity of the location (i.e., network address).		TI.2.1.3.15	NC	EN
TI.2.1.3.16 Function	Data Corruption System Audit Trigger	TI.2.1.3.16	NC	EN
Statement: Manage Audit Trigger initiated to track data corruption events. **Description:** Capture data corruption event, including key metadata (who, what, when, where, why).				
1. The system SHALL audit each occurrence or detection of data corruption.		TI.2.1.3.16	NC	EN
2. The system SHALL capture identity of the organization.		TI.2.1.3.16	NC	EN
3. IF known, THEN the system SHALL capture identity of the user.		TI.2.1.3.16	NC	EN
4. The system SHALL capture identity of the system.		TI.2.1.3.16	NC	EN
5. The system SHALL capture the event initiating audit trigger.		TI.2.1.3.16	NC	EN
6. The system SHALL capture the date and time of the event initiating audit trigger.		TI.2.1.3.16	NC	EN
7. The system SHALL capture identity of the location (i.e., network address).		TI.2.1.3.16	NC	EN
TI.2.1.4 Function	Clinical Audit Triggers	TI.2.1.4	NC	EN
Statement: Manage Clinical Audit Triggers **Description:** Clinical Audit Triggers are designed to capture certain clinical events, both routine and exceptional, including key metadata (who, what, when, where, why).				
1. The system SHALL provide the ability to track all clinical alerts.		TI.2.1.4	NC	EN
2. The system SHALL provide the ability to track all acknowledgements of clinically-significant report changes.		TI.2.1.4	NC	EN
3. The system SHOULD provide the ability to track when decision support alerts have been disabled.		TI.2.1.4	NC	EN
TI.2.1.4.1 Function	Clinical Alerts Clinical Audit Trigger	TI.2.1.4.1	NC	EN
Statement: Manage Audit Trigger initiated to track clinical alerts. **Description:** Capture clinical alerts, both routine and exceptional, including key metadata (who, what, when, where, why).				

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
1. The system SHALL audit each occurrence of a clinical alert according to scope of practice, organizational policy, and/or jurisdictional law.		TI.2.1.4.1	NC	EN
2. The system SHALL capture identity of the organization.		TI.2.1.4.1	NC	EN
3. IF known, THEN the system SHALL capture identity of the user.		TI.2.1.4.1	NC	EN
4. The system SHALL capture identity of the system.		TI.2.1.4.1	NC	EN
5. The system SHALL capture the event initiating audit trigger.		TI.2.1.4.1	NC	EN
6. The system SHALL capture the date and time of the event initiating audit trigger.		TI.2.1.4.1	NC	EN
7. The system SHALL capture identity of the location (i.e., network address).		TI.2.1.4.1	NC	EN
TI.2.1.4.2 Function	Acknowledgements of Clinically Significant Report Changes Clinical Audit Trigger	TI.2.1.4.2	NC	EN
Statement: Manage Audit Trigger initiated to track acknowledgement of clinically significant report changes. **Description:** Capture acknowledgement of clinically significant report changes, both routine and exceptional, including key metadata (who, what, when, where, why).				
1. The system SHALL audit each occurrence of an acknowledgement of clinically significant report changes according to scope of practice, organizational policy, and/or jurisdictional law.		TI.2.1.4.2	NC	EN
2. The system SHALL capture identity of the organization.		TI.2.1.4.2	NC	EN
3. IF known, THEN the system SHALL capture identity of the user.		TI.2.1.4.2	NC	EN
4. The system SHALL capture identity of the system.		TI.2.1.4.2	NC	EN
5. The system SHALL capture the event initiating audit trigger.		TI.2.1.4.2	NC	EN
6. The system SHALL capture the date and time of the event initiating audit trigger.		TI.2.1.4.2	NC	EN
7. The system SHALL capture identity of the location (i.e., network address).		TI.2.1.4.2	NC	EN
TI.2.1.4.3 Function	Disable Decision Support Alerts Clinical Audit Trigger	TI.2.1.4.3	NC	EN
Statement: Manage Audit Trigger initiated to track disabling of decision support alerts. **Description:** Capture disabling of decision support alerts, both routine and exceptional, including key metadata (who, what, when, where, why).				
1. The system SHALL audit each occurrence when decision support alerts are disabled according to scope of practice, organizational policy, and/or jurisdictional law.		TI.2.1.4.3	NC	EN
2. The system SHALL capture identity of the organization.		TI.2.1.4.3	NC	EN
3. IF known, THEN the system SHALL capture identity of the user.		TI.2.1.4.3	NC	EN
4. The system SHALL capture identity of the system.		TI.2.1.4.3	NC	EN
5. The system SHALL capture the event initiating audit trigger.		TI.2.1.4.3	NC	EN
6. The system SHALL capture the date and time of the event initiating audit trigger.		TI.2.1.4.3	NC	EN
7. The system SHALL capture identity of the location (i.e., network address).		TI.2.1.4.3	NC	EN
8. The system SHALL capture the rationale for disabling clinical alerts.		TI.2.1.4.3	NC	EN
TI.2.2 Function	Audit Log Management	TI.2.2	NC	EN
Statement: Manage Audit Log **Description:** Audit Triggers create Audit Log entries. Audit Log entries are typically managed as persistent evidence of events occurring over time, including events pertaining to record management, security, system operations and performance, key clinical situations. Audit log entries capture event details, including key metadata (who, what, when, where).Audit log functions fulfill log maintenance and persistence requirements according to scope of practice, organizational policy, and jurisdictional law.				
1. The system SHALL provide the ability to capture audit log entries using a standards-based audit record format according to scope of practice, organizational policy, and/or jurisdictional law (e.g., IETF RFC 3881 "Internet Engineering Task Force, Request For Comment, Security Audit and Access Accountability Message XML Data Definitions for Healthcare Applications").		TI.2.2	NC	EN
4. The system SHALL provide the ability to log access to audit log entries, and/or metadata.		TI.2.2	NC	EN
TI.2.2.1 Function	Audit Log Indelibility	TI.2.2.1	NC	EN
Statement: Manage Audit Log Indelibility **Description:** Audit logs must be maintained in a persistent and indelible form according to scope of practice, organizational policy, and jurisdictional law.				
1. The system SHALL manage each Audit Log entry as a persistent, indelible (unalterable) data object including all metadata.		TI.2.2.1	NC	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
TI.2.3 Function	Audit Notification and Review	TI.2.3	NC	EN

Statement: Notify of Audit Events, Review Audit Log

Description: EHR system functions allow various methods of critical event notification (from audit triggers) as well as routine log review.

Audit log notification and review functions implement requirements according to scope of practice, organizational policy, and jurisdictional law.

1.	The system SHALL provide the ability to render a report based on audit log entries.	TI.2.3	NC	EN
2.	The system SHALL provide the ability to render reports based on ranges of system date and time that audit log entries were captured.	TI.2.3	NC	EN
4.	The system SHALL provide the ability to authorize emergency access to certain logs based on criteria such as individual work assignment, specific user role, specific reason(s), or a need to access a specific patient's information/record entries according to organizational policy and/or jurisdictional law.	TI.2.3	NC	EN

TI.3 Function	Registry and Directory Services	TI.3	NC	EN

Statement: Enable the use of registry services and directories to uniquely identify, locate and supply links for retrieval of information related to: - patients and providers for healthcare purposes; - payers, health plans, sponsors, and employers for administrative and financial purposes; - public health agencies for healthcare purposes, and- healthcare resources and devices for resource management purposes.

Description: Registry and directory service functions are critical to successfully managing the security, interoperability, and the consistency of the health record data across an EHR-S. These services enable the linking of relevant information across multiple information sources within, or external to, an EHR-S for use within an application. This applies to directories/registries internal to the EHR-S as well as directories/registries external to the EHR-S. Transmission may occur automatically or manually and may include small or large amounts of data. Directories and registries support communication between EHR Systems and may be organized hierarchically or in a federated fashion. For example, a patient being treated by a primary care physician for a chronic condition may become ill while out of town. The new provider's EHR-S interrogates a local, regional, or national registry to find the patient's previous records. From the primary care record, a remote EHR-S retrieves relevant information in conformance with applicable patient privacy and confidentiality rules.

An example of local registry usage is an EHR-S application sending a query message to the Hospital Information System to retrieve a patient's demographic data.

1.	The system SHALL provide the ability to manage internal registry services and directories.	TI.3	NC	EN
2.	The system SHALL provide the ability to exchange information with external registry services and directories.	TI.3	NC	EN
3.	The system SHALL provide the ability to exchange information securely with external registry services and directories.	TI.3	NC	EN
4.	The system SHALL conform to function TI.5.1 (Application and Structured-Document Interchange Standards) to exchange information with external registry services and directories.	TI.3	NC	EN
5.	The system SHOULD capture and render local registry services and directory information through standards-based interfaces.	TI.3	NC	EN
6.	IF the system communicates with external registry services and directories (i.e., external to an EHR-S), THEN the system SHOULD capture and render information using standards-based interfaces.	TI.3	NC	EN
7.	The system SHOULD provide the ability to determine the unique identity of a patient through the use of internal, and/or external registry services or directories.	TI.3	NC	EN
8.	The system MAY provide the ability to determine links to healthcare information regarding a patient through the use of internal, and/or external registry services or directories.	TI.3	NC	EN
9.	The system MAY provide the ability to determine the unique identity of a provider through the use of internal, and/or external registry services or directories.	TI.3	NC	EN

TI.4 Function	Standard Terminology and Terminology Services	TI.4	NC	EN

Statement: Support semantic interoperability through the use of standard terminologies, standard terminology models and standard terminology services.

Description: The purpose of supporting terminology standards and services is to enable semantic interoperability. Interoperability is demonstrated by the consistency of human and machine interpretation of shared data and reports. It includes the capture and support of consistent data for templates and decision support logic.

Terminology standards pertain to concepts, representations, synonyms, relationships and computable (machine-readable) definitions. Terminology services provide a common way for managing and retrieving these items, including historically correct version interpretation. Terminology services need to support legal requirements for retrospective health record information and system data.

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
TI.4.1 Function	Standard Terminology and Terminology Models	TI.4.1	NC	EN

Statement: Employ approved standard terminologies to ensure data correctness and to enable semantic interoperability (both within an enterprise and externally).Support a formal standard terminology model.

Description: Semantic interoperability requires standard terminologies combined with a formal standard information model. An example of an information model is the HL7 Reference Information Model. Another example is the ISO/EN 13606 Electronic Health Record Communication.

A terminology provides semantic and computable identity to its concepts. Examples of terminologies that an EHR-S may support include: LOINC, SNOMED, ICD-9, ICD-10, and CPT-4.Terminologies are use-case dependent and may or may not be realm dependent. The key is that the standard be approved by all stakeholders. For example, terminologies for public health interoperability may differ from those for healthcare quality, administrative reporting, research, etc.

Formal standard terminology models enable common semantic representations by describing relationships that exist between concepts within a terminology or in different terminologies, such as exemplified in the model descriptions contained in the HL7 Common Terminology Services specification.

The clinical use of standard terminologies is greatly enhanced with the ability to perform hierarchical inference searches across coded concepts. Hierarchical Inference enables searches to be conducted across sets of coded concepts stored in an EHR-S. Relationships between concepts in the terminology are used in the search to recognize child concepts of a common parent. For example, there may be a parent concept, "penicillin containing preparations" which has numerous child concepts, each of which represents a preparation containing a specific form of penicillin (Penicillin V, Penicillin G, etc.). Therefore, a search may be conducted to find all patients taking any form of penicillin preparation.

Clinical and other terminologies may be provided through a terminology service internal or external to an EHR-S.

1. The system SHALL provide the ability to exchange data with other systems(internal or external to the EHR-S) using approved standard terminologies.	TI.4.1	NC	EN
2. The system SHALL determine that clinical terms and coded clinical data exist in an approved standard terminology.	TI.4.1	NC	EN
3. The system SHOULD provide the ability to receive and transmit healthcare data using formal standard information models and approved standard terminologies according to scope of practice, organizational policy, and/or jurisdictional law.	TI.4.1	NC	EN
4. The system SHOULD provide the ability to manage data using a formal standard terminology model according to scope of practice, organizational policy, and/or jurisdictional law.	TI.4.1	NC	EN
5. The system SHOULD provide the ability to determine hierarchical inferences (e.g., subsumption across coded terminology concepts that are expressed using standard terminology models).	TI.4.1	NC	EN
6. The system SHALL provide the ability to manage terminology assets and supporting tools (internal or external to the EHR-S).	TI.4.1	NC	EN
7. IF there is no recognized-standard terminology model available, THEN the system MAY provide the ability to manage data using a locally-defined standard terminology model.	TI.4.1	NC	EN
8. The system SHOULD provide the ability to capture information into structured data formats using approved standard terminologies without the user requiring knowledge of the terminologies used.	TI.4.1	NC	EN
9. The system SHOULD 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.	TI.4.1	NC	EN
10. The system SHOULD provide the ability to present standard terminology terms in a language which is appropriate for the user.	TI.4.1	NC	EN

TI.4.2 Function	Maintenance and Versioning of Standard Terminologies	TI.4.2	NC	EN

Statement: Enable version control according to scope of practice, organizational policy, and/or jurisdictional law to ensure maintenance of utilized standard terminologies. This includes the ability to accommodate changes to terminology sets as the source terminology undergoes its natural update process (new codes, retired codes, redirected codes). Such changes need to be cascaded to clinical content embedded in templates, custom formularies, etc., as determined by existing policy.

Description: Version control allows for multiple sets or versions of the same terminology to exist and be distinctly recognized over time. Standard terminologies are usually periodically updated, and concurrent use of different versions may be required. Ideally, the meaning of a concept never changes over time, but a concept can be deprecated, and replaced with a new concept in a new version. However, in some terminologies, the meaning of a concept can change over time. In any case, it is important that retrospective analysis and research maintains the ability to relate to the appropriate conceptual meaning. If the terminology encoding for a concept changes over time, it is also important that for legal health records, as well as for retrospective analysis and research, the different encodings can be correlated to ensure the permanence of the concept as originally captured. This does not necessarily imply that complete older versions of the terminology be kept in the EHR-S, only access to the changes needs to be maintained.

1. The system SHALL provide the ability to manage data using different versions of standard terminologies.	TI.4.2	NC	EN
2. The system SHALL provide the ability to update standard terminologies.	TI.4.2	NC	EN
3. The system SHOULD maintain relationships among versions of a standard terminology to allow preservation of interpretation over time.	TI.4.2	NC	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
4. The system SHOULD provide the ability to receive and harmonize data from and transmit data to other systems that use known different versions of a terminology standard while preserving the meaning of that data.		TI.4.2	NC	EN
5. The system SHALL provide the ability to update terminologies to a deprecated status.		TI.4.2	NC	EN
6. The system SHALL provide the ability to update individual codes within a terminology to a deprecated status.		TI.4.2	NC	EN
7. The system SHALL 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 scope of practice, organizational policy, and/or jurisdictional law.		TI.4.2	NC	EN
8. The system SHALL provide the ability to update standard terminologies used to enter clinical content (via templates, custom formularies, etc.)		TI.4.2	NC	EN
9. The system SHALL 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.		TI.4.2	NC	EN
TI.4.3 Function	Terminology Mapping	TI.4.3	NC	EN

Statement: Map or translate one terminology to another as needed by local, regional, national, or international interoperability requirements.

Description: The ability to map or translate one terminology to another is fundamental to an organization in an environment where several terminologies are in play to meet different purposes. It is a common occurrence that data is captured using one terminology, but is shared using another terminology.

Example: Within a healthcare organization there may be a need to map terminology concepts with the same semantic meaning to meet different purposes (e.g., between an EHRS and an external laboratory system, or between an EHRS and a billing system). Standard terminologies are evolving and maps will need to be adjusted to support this evolution and more sophisticated use of standard terminologies and maps over time.

Realm specific (including local, regional, national or international) interoperability requirements can also determine the need for terminology mapping, and in many cases terminology mapping services (internal or external) can be used to satisfy these requirements.

The interaction and mapping of terminologies may be called into question in a legal proceeding, when clinical decisions were documented or when semantic meaning could be misinterpreted. It is important to seek guidance, document and retain all mapping decisions for all types of terminology mapping, and to recognize when mapping may not be possible from one concept to another. The quality of mapping is dependent upon the skills and interpretation of standard terminologies and clinical information by mapping experts.

1. The system SHALL provide the ability to manage data using terminology maps which may be provided by terminology mapping services (internal or external).	TI.4.3	NC	EN
2. The system SHOULD provide the ability to update terminology maps using standard terminology services (internal or external).	TI.4.3	NC	EN
3. The system SHOULD provide the ability to render data quality and technical quality reports for a user to determine the validity of terminology mappings using approved mapping techniques.	TI.4.3	NC	EN
4. The system MAY provide the ability for a user to maintain custom terminology maps using approved mapping techniques where formal standard terminology maps are unavailable.	TI.4.3	NC	EN
5. The system MAY provide the ability for a user to maintain custom terminology maps to formal standard terminology maps in order to support historical data use.	TI.4.3	NC	EN
TI.5 Header	Standards-Based Interoperability	TI.5	NC	EN

Statement: Provide automated health care delivery processes and seamless exchange of clinical, administrative, and financial information through standards-based solutions.

Description: Interoperability standards enable certain applications to be shared among EHR systems, resulting in a unified (logical) view of a given EHR system where several disparate systems may actually be participating transparently. Interoperability standards also enable certain information to be shared among EHR systems (including information that resides in regional, national, or international information exchanges). Interoperability standards also promote timely and efficient information capture, use, and re-use, often reducing the cumulative workload of the broad set of stakeholders.

When health-related information is exchanged -- or when external applications are used to extend an EHR system -- the interoperability methods and underlying standards that were used in the process may need to be disclosed during a legal proceeding (especially when the resulting information becomes part of the patient's medical record).

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
TI.5.1 Header	Application, Structured-Message, and Structured-Document Interchange Standards	TI.5.1	NC	EN

Statement: Support an EHR system's ability to operate seamlessly with systems that adhere to recognized application interchange standards. These systems include other EHR systems, subcomponents of an EHR system, or other (authorized, non-EHR) systems.

Description: Since a health care organization typically has various external and internal interoperability requirements, it must use a set of corresponding interoperability or interchange standards that will meet its connectivity and information structure, format, and semantic requirements. Information should be exchanged -- and applications should provide functionality -- in a manner that appears to be seamless to the user. To be specific, if data is received from an external source that requires a user to manually copy-and-paste that data into multiple parts of the system, the exchange is not considered to be "seamless".

Examples of standards-based EHR information content and exchange methods include: standards-based data extracts, standards-based messages, standards-based documents (e.g., HL7 Clinical Document Architecture (CDA) documents), standards-based healthcare transactions, and standards-based images (e.g., Digital Imaging and Communication in Medicine (DICOM) documents).

Support for multiple interaction modes is needed to respond to differing levels of immediacy and types of exchange. For example, messaging is effective for many near-real time, asynchronous data exchange scenarios but may not be appropriate if the end-user is requesting an immediate response from a remote application.

A variety of interaction modes are typically supported such as:

- Unsolicited Notifications (e.g., Adam Everyman has arrived at the clinic for his scheduled appointment);
- Query/Response (e.g., Query: Is Adam Everyman known to the system? Response: Yes, Adam's medical record number is 12345678);
- Service Request and Response (e.g., Request: Laboratory Order for “Fasting Blood Sugar”. Response: the results of the test);
- Information Interchange between organizations (e.g., in a regional health exchange or in a national health system);
- Structured/discrete clinical documents (e.g., a structured clinical note);
- Unstructured clinical document (e.g., dictated surgical note).

Standard terminology is a fundamental part of interoperability and is described in function TI.4 . Using a formal explicit information model further optimizes interoperability. An example of an information model is the HL7 Reference Information Model (RIM). Organizations typically need to deal with more than one information model and may need to develop a mapping between information models, a meta-model (that helps to explain and organize the various information models), or both.

TI.5.1.1 Function	Application Interchange Standards	TI.5.1.1	NC	EN

Statement: Support the ability to operate seamlessly with other systems by using applications, and/or structured messages and documents that adhere to interchange standards.

Description: Placeholder - Not Defined at this time

1.	The system SHALL provide the ability to receive and transmit information using interchange standards as required by realm / local -specific profiles, and/or by recognized jurisdictional authorities.	TI.5.1.1	NC	EN
2.	The system SHALL provide the ability to integrate with the operations of other systems that adhere to interchange standards as required by realm / local -specific authorities and/or by recognized jurisdictional authorities.	TI.5.1.1	NC	EN
3.	The system SHALL conform to function TI.4 (Standard Terminology and Terminology Services) including all child-functions, to support terminology standards according to scope of practice, organizational policy, and/or jurisdictional law.	TI.5.1.1	NC	EN
4.	IF a standard information model is not available, THEN the system SHOULD provide the ability to exchange information with other systems in a seamless manner by using a formal explicit information model.	TI.5.1.1	NC	EN
5.	The system MAY provide the ability to exchange information with other systems by using an explicit formal information model, and/or by using a standard coded terminology.	TI.5.1.1	NC	EN
6.	The system SHALL provide the ability to receive and transmit data using standard, coded terminology.	TI.5.1.1	NC	EN
7.	The system SHOULD provide the ability to export data using an explicit and formal information model in accordance with industry and governmental-mandated standards.	TI.5.1.1	NC	EN
8.	The system SHOULD provide the ability to import data using an explicit and formal information model in accordance with industry and governmental-mandated standards.	TI.5.1.1	NC	EN
9.	The system SHOULD provide the ability to harmonize data with another system.	TI.5.1.1	NC	EN
11.	The system SHALL store a log record of each data exchange (transaction) when transmitting information with external systems.	TI.5.1.1	NC	EN

TI.5.1.2 Function	Structured-Document Interchange Standards	TI.5.1.2	NC	EN

Statement: Support the management of structured documents.

Description: Structured documents are an important method of facilitating the exchange of information to support care. Documents are often considered to be more permanent in nature; messages are often considered to be more transitory in nature. Examples of structured documents include: a referral from a primary care physician to a specialist; a medical summary; a discharge instruction for the patient.

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
1. The system SHALL provide the ability to exchange structured documents according to scope of practice, organizational policy, and/or jurisdictional law.		TI.5.1.2	NC	EN
TI.5.1.3 Function	Structured-Message Interchange Standards	TI.5.1.3	NC	EN
Statement: Support the management of structured messages. **Description:** Structured messages are an important method of facilitating the exchange of information to support care. Messages are often considered to be more transitory in nature; documents are often considered to be more permanent in nature.				
1. The system SHALL provide the ability to manage structured messages according to scope of practice, organizational policy, and/or jurisdictional law.		TI.5.1.3	NC	EN
TI.5.2 Function	Interchange Standards Versioning and Maintenance	TI.5.2	NC	EN
Statement: Support various versions of an interchange standard. **Description:** Interchange standards characteristically change throughout their lifecycles; those changes are often tagged with "version" numbers. EHR systems need to control the various versions of interchange standards that are used within an EHR implementation and accommodate changes that arise with each version. For example, if an organization migrates to version 2.5 of HL7's messaging standard, it may choose to utilize that version's specimen or blood bank information capabilities. The organization may also find that certain fields have been retained for backwards compatibility only or withdrawn altogether. The EHR-S needs to be able to handle all of these possibilities. Standards typically evolve in such a way as to protect backwards compatibility. On the other hand, sometimes there is little, or no, backwards compatibility when an organization may need to replace an entire standard with a new methodology. An example of this is migrating from HL7 v2 to HL7 v3. Interchange standards that are backward compatible support exchange among senders and receivers who are using different versions. Version control ensures that those sending information in a later version of a standard consider the difference in information content that can be interchanged effectively with receivers, who are capable of processing only earlier versions. That is, senders need to be aware of the information that receivers are unable to capture and adjust their business processes accordingly. Version control enables multiple versions of the same interchange standard to exist and be distinctly recognized over time. Since interchange standards are usually periodically updated, concurrent use of different versions may be required. Large (and/or federated) organizations typically need to use different versions of an interchange standard to meet internal organizational interoperability requirements. For example, the enterprise-wide standard might use HL7 v2.5 for laboratory messages, but some regions of the enterprise might be at a lower level. It should be possible to retire deprecated interchange standards versions when applicable business cycles are completed while maintaining obsolete versions. An example use of this is for possible claims adjustment throughout the claim's life cycle. When interchange standards change over time, it is important that retrospective analysis and research correlate and note gaps between the different versions' information structures to support the permanence of concepts over time.				
1. The system SHALL provide the ability to exchange information with other systems that use different versions of interchange standards.		TI.5.2	NC	EN
2. The system SHALL provide the ability to exchange information based on updated (or reconfigured) interchange standards and/or based on updated business needs.		TI.5.2	NC	EN
4. The system SHOULD provide the ability to integrate with other systems that use previously-supported versions of an interoperability standard according to scope of practice, organizational policy, and/or jurisdictional law.		TI.5.2	NC	EN
TI.5.3 Function	Standards-Based Application Integration	TI.5.3	NC	EN
Statement: Integrate applications in a standards-based manner. **Description:** An EHR-S often consists of multiple applications. Some of those applications may be within the EHR-S; others may be external to the EHR-S. The user of the EHR-S often benefits when those applications are integrated. Application integration can be accomplished in an ad-hoc fashion or in a standards-based fashion. The method(s) by which applications may be integrated within an organization depends on that organization's approach to application integration. A given organization could conceivably employ multiple application integration approaches to meet various application integration requirements.				
1. The system SHALL provide the ability to integrate applications in a standards-based fashion when the system is composed of, and/or is extended by disparate applications.		TI.5.3	NC	EN
2. The system SHOULD provide the ability to integrate user (or system) authentication for the purposes application context management (e.g., Graphical User Interface application integration via HL7's Context Management Standard from the Clinical Context Object Work Group (CCOW)).		TI.5.3	NC	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
TI.5.4 Function	Interchange Agreements	TI.5.4	NC	EN
	Statement: Support the use of Interchange Agreements to specify the rules, responsibilities, expectations, and methods by which Interchange Agreement partners may exchange information. **Description:** Systems that wish to communicate with each other must agree on certain parameters/criteria that will govern an information exchange process. Interchange agreements enable partnering systems to discover, negotiate, and utilize those parameters/criteria. An EHR-S can use this information to define how data will be exchanged between the sending and the receiving partners. Interchange services and capabilities can be discovered in an automated fashion. Entity directories can be used to determine the address, profile, and data exchange requirements of known, and/or potential Interchange Agreement partners. Entity registries can be used to determine the security, addressing, and reliability requirements between potential Interchange Agreement partnering systems.			
1.	The system SHALL exchange information with Interchange Agreement partners based on interoperability agreement descriptions.	TI.5.4	NC	EN
2.	IF an interchange agreement description specifies the use of a certain standard, THEN the system SHOULD exchange information using the standard specified by the interchange agreement description according to scope of practice, organizational policy, and/or jurisdictional law.	TI.5.4	NC	EN
3.	The system MAY conform to function TI.3 (Registry and Directory Services) to interact with registries, and/or directories to determine the address, profile, and data exchange requirements of known, and/or potential partners.	TI.5.4	NC	EN
5.	The system SHOULD provide the ability to manage Interchange Agreements that have been established with Interchange Agreement partners.	TI.5.4	NC	EN
TI.6 Function	Business Rules Management	TI.6	NC	EN
	Statement: Manage the ability to create, update, delete, view, and version business rules including institutional preferences. Apply business rules from necessary points within an EHR-S to control system behavior. An EHR-S audits changes made to business rules, as well as compliance to and overrides of applied business rules. **Description:** EHR-S business rule implementation functions include decision support, diagnostic support, workflow control, and access privileges, as well as system and user defaults and preferences. An EHR-S supports the ability of providers and institutions to customize decision support components such as triggers, rules, or algorithms, as well as the wording of alerts and advice to meet realm specific requirements and preferences.			
1.	The system SHALL provide the ability to manage business rules.	TI.6	NC	EN
2.	The system SHOULD provide the ability to enter, import, or receive business rules to guide system behavior.	TI.6	NC	EN
3.	The system SHOULD provide the ability to maintain business rules and their components.	TI.6	NC	EN
5.	The system SHOULD provide the ability to render business rules.	TI.6	NC	EN
6.	The system SHOULD provide the ability to manage diagnostic decision support rules that guide system behavior according to scope of practice, organizational policy, and/or jurisdictional law.	TI.6	NC	EN
7.	The system SHOULD provide the ability to manage workflow control rules that guide system behavior according to scope of practice, organizational policy, and/or jurisdictional law.	TI.6	NC	EN
8.	The system SHOULD provide the ability to manage access privilege rules that guide system behavior according to scope of practice, organizational policy, and/or jurisdictional law.	TI.6	NC	EN
9.	The system SHOULD provide the ability to manage other rules (for example, monitoring rules, user defaults rules and preferences rule) that guide system behavior according to scope of practice, organizational policy, and/or jurisdictional law.	TI.6	NC	EN
10.	The system SHALL provide the ability to determine system behavior based upon defined business rules.	TI.6	NC	EN
TI.7 Function	Workflow Management	TI.7	NC	EN
	Statement: Support workflow management functions including both the management and set up of work queues, personnel lists, and system interfaces as well as the implementation functions that use workflow-related business rules to direct the flow of work assignments. **Description:** Workflow management functions that an EHR-S supports include: -Distribution of information to and from internal and external parties; -Support for task-management as well as parallel and serial task distribution; -Support for notification and task routing based on system triggers; and-Support for task assignments, escalations and redirection in accordance with business rules. Workflow definitions and management may be implemented by a designated application or distributed across an EHR-S.			
1.	The system SHALL provide the ability to manage workflow business rules including work queues, personnel lists, and system interfaces.	TI.7	NC	EN
2.	The system SHOULD provide the ability to determine workflow assignments based on workflow-related business rules.	TI.7	NC	EN
11.	The system SHOULD provide the ability to render a notification of a workflow update.	TI.7	NC	EN

Section/Id#: Type:	Header/Function Name Conformance Criteria	Reference	Chg Ind	Priority
13.	The system SHOULD provide the ability to transmit a workflow (task list) queue update request to an external system.	TI.7	NC	EN
14.	The system SHOULD provide the ability to receive a workflow (task list) queue update response from an external system.	TI.7	NC	EN
TI.8 Function	Database Backup and Recovery	TI.8	NC	EN
	Statement: Provide for the ability to backup and recover the EHR system. **Description:** To enable the preservation of the EHR database and its data, functionality needs to be present to record a copy of the database and its contents to offline media as well as the recovery of the system from a backup copy and resumption of normal system operation. The backup must preserve both data as well as database structure and definition information sufficient to recover a complete functional EHR system. Database components may include, but not be limited to application data, security credentials, log/audit files, and programs; ultimately all EHR components necessary to provide a full and complete operating environment. Finally, the backup must be capable of being used during recovery processing to restore an exact copy of the EHR system as of a particular instant in time. This is a requirement to be able to preserve logical consistency of information within the recovered EHR system. In providing for this capability the system may include multiple backup, and/or redundancy solutions such as fail-over architecture, database journaling, transaction processing, etc. The backup and recovery function must address both physical system failure (i.e., failure of EHR system hardware) as well as logical system failure (e.g., database corruption). To support the requirement that the EHR system be available whenever it is needed within the design parameters of the system and provide reliability and redundancy of the EHR database and its data, the backup function shall not impact user functionality or appreciably impact user performance. The backup function may include features which permit multiple processes and technologies to perform its task. This may include multiple backup technologies such as tape, disk, cloud, etc. Also, multiple architectures such as redundancy, online, near-line and off-line media.			
1.	The system SHALL provide the ability to backup and recover EHR information according to scope of practice, organizational policy, and/or jurisdictional law.	TI.8	NC	EN
2.	The system SHALL provide the ability to backup and recover all database contents including programs and all software components necessary to permit a complete EHR to be recovered. (i.e., 'full' backup and recovery)	TI.8	NC	EN
3.	The system MAY provide the ability to backup and recover EHR information using alternative backup methods in addition to a full backup/recovery (e.g., incremental, differential, reverse delta, or continuous).	TI.8	NC	EN
4.	The system MAY provide the ability to backup EHR information according to a defined schedule of storage media rotation.	TI.8	NC	EN
5.	IF the EHR user requirements specify that the EHR system be available continuously, THEN the system SHALL provide the ability to backup EHR information concurrently with the normal operation of the EHR application.	TI.8	NC	EN
6.	The system SHOULD provide the ability to backup EHR information to a remote location.	TI.8	NC	EN
7.	The system MAY provide the ability to backup EHR information to more than one storage media (e.g., disk, tape, or cloud).	TI.8	NC	EN
8.	The system MAY provide the ability to encrypt backup data.	TI.8	NC	EN
TI.9 Function	System Management Operations and Performance	TI.9	NC	EN
	Statement: Manage the change of status of an external facility and the ability to access, render and determine information related to Service Level Agreement. **Description:** A health care delivery relies on services provided by other external facilities such as laboratories or Long Term Care facilities. The status of those facilities is subject to change for example: power outage, flooding or overcapacity. Therefore, the EHR system needs to capture the status of the external facilities, notify appropriate individuals / organizations or even change the workflow based on established business rules. Change of the status of an external facility is patient safety concern because a provider may need to adjust patient care or care workflows accordingly. For example, changes of status of external facility include: laboratory no longer accredited, laboratory power outage, Long Term Care facility at overcapacity. If laboratory loses accreditation an administrator needs to be notified to adjust the workflow. If status change is anticipated on regular basis, the system may automatically trigger workflow adjustment according to established business rules that take into consideration the status of the external facility. The example for later, the local Long Term Care facility may routinely exceed the capacity on the weekends; therefore, the business rule will accommodate for automatic workflow adjustments. A provider may need to be aware of certain Service Level Agreement information in order to mitigate patient safety-related risks that depend on system availability or system performance.			
1.	The system SHOULD provide the ability to manage the change of status of an external facility.	TI.9	NC	EN
2.	The system SHOULD provide the ability to manage Service Level Agreement information according to scope of practice, organizational policy, and/or jurisdictional law.	TI.9	NC	EN