

# EMRAM

**HIMSS** SOLUTION

Electronic Medical Record Adoption Model  
Achievement Assessment Report

**AOU Sassari**

**PO San Pietro - Santa Annunziata**

Sardegna

Italy

Prepared By



Survey Date: 2024-08-09

Report Date: 2024-08-09

# Table of Contents

## Electronic Medical Record Adoption Model

- Model Description
- Purpose
- Methodology

## Technology and Key Hospital Performance Figures

- Technology and Integration with EMR
- Key Hospital Figures and Performance Indicators

## Baseline Achievement

- Executive Summary
- Score
- Domain-Focus Area Findings

## Data Capture & Health Information Exchange

- Domain-Focus Area Overview
- Opportunities

## Patient Engagement

- Domain-Focus Area Overview
- Opportunities

## Healthcare Analytics & Outcomes Measurement

- Domain-Focus Area Overview
- Opportunities

## Resilience Management

- Domain-Focus Area Overview
- Opportunities

## Clinical User Adoption

- Domain-Focus Area Overview
- Opportunities

## Contacts

# Electronic Medical Record Adoption Model

## Model Description

The EMRAM is an eight stage Maturity Model (0-7), starting at Stage 0 and working towards the pinnacle of demonstrating organization-wide effective use of EMR technology driving improved outcomes at each stage. The stages have requirements in five focus areas:

- Data Capture & Health Information Exchange
- Patient Engagement
- Healthcare Analytics & Outcomes Measurement
- Resilience Management
- Clinical User Adoption

The focus areas and criteria statements represent a spectrum of capabilities needed to advance the effective use of EMR technology, optimizing operations and patient engagement outcomes.

EMRAM HIMSS SOLUTION	EMR Adoption Model Capabilities
7	Integration of data from multiple external sources. Service users receive alerts and reminders to support self-managed care and use automated tools to measure patient outcomes. Digital infrastructure tools enable dynamic patient engagement in managing personal health and care.
6	Integration of medical devices. Health Information Exchange supports data sharing. Service users submit self-reported outcomes data. Wearables and implants support remote monitoring and patient management of health and care. Online services improve access, and health literacy.
5	Integration of data from external sources. Change in clinical parameters is continuously monitored by alerts and warnings. Telehealth and virtual care services are available. Intruder Prevention Systems manage unauthorised access. Technology supports bedside processes.
4	Computerised Practitioner Order Entry and Electronic prescribing within an electronic medicines administration record. Clinical and Information governance is well defined. Monitoring of Clinical outcome and patient satisfaction targets.
3	Electronic clinical documentation is accessed remotely through the CDR. Role based access controls are in place.
2	A clinical data repository (CDR) provides access to results and reports. Governance and Policy control Clinical Decision Support opportunities, Training records and IT security.
1	Laboratory, Imaging, Pharmacy and Cardiology systems produce patient centric reports and results. Resilience management plans are in place.

## Purpose

The HIMSS Electronic Medical Record Adoption Model (EMRAM) measures clinical outcomes, patient engagement and clinician use of EMR technology to strengthen organizational performance and health outcomes across patient populations. The internationally applicable EMRAM incorporates methodology and algorithms to score a whole hospital, including inpatient, outpatient and day-case services provided on the hospital campus. EMRAM scores hospitals around the world relative to their digital maturity, providing a detailed road map to facilitate adoption and begin a digital transformation journey towards aspirational outcomes.

Measuring evidence-based data at each stage, organizations use EMRAM to optimize digital work environments, improve performance and financial sustainability, build a sustainable workforce, and support an exceptional patient experience. Leveraging information digitally improves patient safety, quality and experience of care, and clinician satisfaction by reducing errors, length of stay and duplicate orders, and streamlining the access and use of data to inform care delivery.

## Improve Patient Safety

Evaluate and improve patient safety by optimizing your EMR implementation to meet the needs of the care team and provide access to data and critical information when and where it is needed.

## Increase Patient Satisfaction

Engage with patients and clinicians to manage overall health and wellness. Improve communication, improve productivity and efficiency, reduce the risk of errors in care delivery and strengthen patient engagement and experience. Enhance care delivery by having the right information at the right time for both the patient and the clinician, while improving communication between the care team and the patient or guardian.

## Support Clinicians

An effective EMR is one that is designed for the distinct uses of the clinicians who work with it. The EMRAM ensures the workflow and content in the digital tool meets the needs of the clinical teams while monitoring compliance with approved standards.

## Secure Data

Effective hospital policies and governance support and strengthen data integrity, data security is a critical component of a high performing work environment supported by an EMR . The EMRAM guides the organization in policymaking for the appropriate use and protection of the data the EMR stores and the level of access available to clinician teams, patients, and others within the organization.

## Methodology

Using a Likert Scale scoring methodology, the assessment responses are tabulated to derive accomplishment for each stage, and against the overall model. To achieve a given stage an organization must fulfill the minimum requirements and score 70% or better for overall accomplishment for that stage and all previous stages.

To achieve EMRAM Stage 6 the organization must be scored at EMRAM Stage 6 and successfully pass a formal validation process by a HIMSS reviewer team.

EMRAM Stage 7 can be achieved if the hospital has been validated successfully as EMRAM Stage 6 and can demonstrate that it has achieved aspirational, evidence-based clinical outcomes, meaningful patient engagement strategies and exceptional performance outcomes. A formal validation process with subject matter experts selected by HIMSS is required.

To be assessed against EMRAM a healthcare organization completes an evaluation. This evaluation is composed of a list of requirement statements, taking an hour to complete. The organization completes the evaluation by self-assessing their performance against each requirements statement using the Likert scale noted here:

- **Not Enabled** - The capabilities referenced in the criteria statement are not typically or rarely available
- **Minimally Enabled** - The capabilities referenced in the criteria statement are available in a limited manner
- **Somewhat Enabled** - The capabilities referenced in the criteria statement are available roughly half the time
- **Mostly Enabled** - The capabilities referenced in the criteria statement are generally available most of the time
- **Fully Enabled** - The capabilities referenced in the criteria statement are almost always or always available

## Opportunity Highlighting

The analysis below uses highlighting to identify current standing and various ways to strengthen and improve your EMRAM score. These are the colors used:

- **Red highlights** indicate the EMRAM stages in baseline achievement sections of the report where the minimum criteria are not met, and in the opportunities sections the minimum requirements that must be met.
- **Yellow highlights**, reserved for baseline achievement sections of the report, show that minimum requirements are met but the 70% threshold of an EMRAM stage has not yet been achieved.
- **Green highlights**, reserved for baseline achievement sections of the report, show that minimum requirements and the 70% threshold of an EMRAM stage have been achieved.
- **Blue highlights**, reserved for opportunity sections of the report, show criteria on the next stage in which the 70% threshold of the current overall EMRAM stage is not met.
- **Purple highlights**, reserved for opportunity sections of the report, show criteria on the next stage in which the 70% threshold of the current focus area stage is not met.

# Software Applications



Application	Availability	Vendor	EHR Integration
Clinical Data Repository/EMR	Live and Operational	DEDALUS	Not Applicable
Cardiology Information System	Live and Operational	ESAOTE	Stand-alone - integration
Radiology Information System	Live and Operational	ESAOTE	Stand-alone - integration
Computerized Practitioner Order Entry (CPOE)	Live and Operational	DEDALUS	Stand-alone - integration
Clinical Documentation	Contracted/Installing	DEDALUS	Not Applicable
Physician Documentation	Live and Operational	DEDALUS	EMR/CDR-module (part of suite)
Laboratory Information System	Live and Operational	DEDALUS	Stand-alone - integration
Pharmacy Management System	Live and Operational	ENGINEERING	Stand-alone - not integrated
Electronic Medication Administration Record (eMAR)	Contracted/Installing	DEDALUS	Not Applicable
Radiology PACS	Live and Operational	ESAOTE	Stand-alone - integration
Cardiology PACS	Live and Operational	ESAOTE	Stand-alone - integration
Enterprise Image Repository/Vendor Neutral Archive (VNA)	Not Automated	Not Applicable	Not Applicable
Anti-Virus/Anti-Malware Software	Live and Operational	EXTRAINFORMATICA	Not Applicable
Encryption	Not Automated	Not Applicable	Not Applicable
Intrusion Detection & Prevention System/IDPS	Live and Operational	SOPHOS INC.	Not Applicable
Mobile Device Management	Not Automated	Not Applicable	Not Applicable
Security Risk Assessment Reporting Tool	Not Automated	Not Applicable	Not Applicable
Barcoding	Not Automated	Not Applicable	Not Applicable
RFID	Not Automated	Not Applicable	Not Applicable

# Key Hospital Figures and Performance Indicators

Performance Indicator	
Inpatient Beds	922
Inpatient Episode per annum	36,002
Outpatient Attendances per annum	1,006,990
Annual Operating Expense	408,147,704
Annual IT Operating Expense	5,800,000
Annual IT Capital Expense	3,000,000
Stationary Workstations	840
Mobile Workstations	--
Staff	2,711
Physicians	639
Registered Nurses	1,475
Registered Allied Health Professionals	608
On-site IT Staff	7
Support IT Staff (at the group/trust/health system level)	--
Support IT Staff (at external organizations)	10
Users supported by IT	3,200
Annual Operating Revenue	403,222,622
Capital Expense	13,008,469
Emergency Services Provided	--
Primary Service Provided	General Medical & Surgical
Is this a university organization?	Yes

# Baseline Achievement

## Executive Summary

The Electronic Medical Record Adoption Model (EMRAM) score is derived by comparing the accomplishments of the healthcare organization against the EMRAM. The overall score represents the organizations' overall progress towards healthcare organization electronic medical record maturity. Stages not represented in an area are identified by N/A in the scoring tables below.

## Assessment Overview

The scoring in the following table is based on information collected via the HIMSS EMRAM online self-assessment. Any stage 6 or 7 achievements listed in this section are approximated and require a review by a HIMSS Digital Advisor (validation). If your Stage Achievement is a 6 or 7, a HIMSS associate will contact you to discuss the next steps in your digital transformation journey. You can also contact us at [customerservice@himss.org](mailto:customerservice@himss.org)

Stage Achievement	0	Highest stage according to the online self-assessment
Percent Achievement	26%	% accomplishment against EMRAM model
Stage 7	24%	Stage not achieved
Stage 6	10%	Stage not achieved
Stage 5	20%	Stage not achieved
Stage 4	28%	Stage not achieved
Stage 3	51%	Stage not achieved
Stage 2	51%	Stage not achieved
Stage 1	69%	Stage not achieved

Color Legend
Stage criteria achieved
70% of stage criteria not met
Minimum requirements not met

## Breakdown by Focus Area

Stage	Data Capture & Health Information Exchange	Patient Engagement	Healthcare Analytics & Outcomes Measurement	Resilience Management	Clinical User Adoption
Stage Achievement	0	0	1	0	1
Percent Achievement	36%	7%	26%	17%	39%
Stage 7	30%	1%	29%	0%	10%
Stage 6	0%	9%	4%	17%	18%
Stage 5	7%	28%	25%	25%	25%
Stage 4	20%	0%	41%	20%	40%
Stage 3	10%	N/A	62%	45%	87%
Stage 2	100%	N/A	12%	27%	75%
Stage 1	80%	N/A	75%	0%	100%

N/A refers to stage not represented in area for assessment scoring.

# Data Capture & Health Information Exchange

The organization has the capability to exchange clinical data and information with patients, external organizations, and specialized health teams (rehabilitation facilities, long term care facilities), even if there are no external organizations that have the same EMR capability. In this case, the lack of actual information exchange alone will not prevent the organization from achieving a Stage. The capability is proven by demonstrating that the organization can produce Continuity of Care Record (CCR) or Consolidated Clinical Document Architecture (C-CDA) or similar documents. Organizations must share patient records with patients and care providers across the journey of care (with the consent of the patient).

Stage Achievement	0	
Percent Achievement	36%	
Stage 7	30%	Stage not achieved
Stage 6	0%	Stage not achieved
Stage 5	7%	Stage not achieved
Stage 4	20%	Stage not achieved
Stage 3	10%	Stage not achieved
Stage 2	100%	Stage achieved
Stage 1	80%	Stage not achieved

Color Legend
Stage criteria achieved
70% of stage criteria not met
Minimum requirements not met

## Opportunities

Stage	EMRAM Criteria	Your Performance
7	HIM: Outside records are scanned upon admission or according to policy, e.g., medication history, discharge summary, latest lab values, etc.	Minimally Enabled
7	Imaging: Imaging specialists from radiology and cardiology use structured templates to document their findings.	Mostly Enabled
7	Imaging: External images can be ingested directly into the Image Archive (or similar application) to facilitate easy access for clinicians.	Minimally Enabled
7	Imaging: Clinicians can access images from remote locations through a secure online connection (if permitted by policy).	Fully Enabled
7	Imaging: Medical Imaging results are communicated digitally to clinicians in all patient care settings.	Somewhat Enabled
7	Imaging: All images and waveforms are captured and managed digitally (e.g., CT, MRI, Ultrasound, Digital Radiography, Intravascular US, Coronary Angiogram, ECGs).	Mostly Enabled
7	Any discrete data generated from structured templates is normalized to standard / controlled medical vocabulary (e.g., LOINC, SNOMED, ICD-10) for all Clinician documentation.	Not Enabled
7	Medical device data is fully integrated into the EMR in all critical care areas.	Not Enabled
7	A bi-directional information exchange interface with patients where patients can access their personal health data, can report outcomes, can access clinician teams to support self-management of care.	Not Enabled
7	Social determinants of health (e.g., housing, education, welfare, working conditions, food security, geography and location) are supported by digital tools and technologies which aim to reduce inequalities and ensure inequalities are minimized or eliminated. Predictive analytics tools are examined for bias toward any community affected by social determinants of health and equity and equality are prioritized.	Not Enabled
7	Data integration has resulted in improvements in care delivery and patient outcomes including reduced ancillary consumption from eliminating unnecessary or duplicate tests.	Somewhat Enabled
7	The capacity to integrate data from multiple external sources of clinical data (e.g., patient reported data, external organizations, referring MD's, mobile digital tools for virtual care delivery) into the organization's data repository for tracking, monitoring progress, risks analyses for individual patients, and patient populations.	Minimally Enabled
7	Integration of clinical data with referring and admitting medical staff is supported across the organization. Referring and admitting medical staff have access to the following patient data: access to consultant reports, patient reported outcomes/progress data, lab results, medication profile, allergy status, clinical order management data, surgical/procedure records, imaging reports, medication record alerts, allergy alerts, other.	Minimally Enabled
7	Data from external sources is fully enabled and integrated into the EMR and is available for clinical decision support, both as alerts and background processes.	Not Enabled
7	Data from external sources is fully enabled and integrated into the EMR to offer seamless workflow for clinicians accessing complete patient records from external organizations or sources of data.	Not Enabled
7	A bi-directional information exchange interface with a national patient database in countries where national repositories exist.	Not Enabled
6	Medical devices are integrated into EMR (e.g., monitoring devices).	Not Enabled
6	All specimen collections are documented in the EMR. Lab receipt of specimens is electronically documented.	Not Enabled
6	Clinically relevant documents are scanned and available in Clinical Data Repository within 24 hours.	Not Enabled
6	HIE enables Structured or Coded Data from external sources to be integrated into the Clinical Data Repository, an icon is used to indicate external data is available for clinician teams.	Not Enabled
5	Care teams offer/provide telehealth (e.g., telephone based monitoring, care navigation) to support patient tele-monitoring, consultation and treatment both prior to admission and post discharge.	Not Enabled
5	Organizations are able to contribute to national and regional data repositories (e.g., IDs, name, address etc.) to identify which care providers have delivered what type of services to a certain patient.	Not Enabled
5	Bidirectional interfaces are in place to external HIE and external registries for both inbound and outbound updates.	Not Enabled
5	Secure texting in place between clinicians to enable team communications and collaboration.	Not Enabled
5	The electronic (automated/digital) system continuously monitors one or more clinical indicators to track each patient's health status, including but not limited to, vital signs and laboratory values in order to automatically alert care team members about risks of patient health status deterioration.	Not Enabled
5	Tracking timeliness of nursing care (e.g., timed medication orders) to examine workflow efficiency, productivity, and care quality by ward, shift and individual nurses.	Not Enabled
5	Rapid response events and code events have a defined documentation strategy to accurately document care interventions.	Somewhat Enabled
5	HIE enables results from external sources to be integrated into the Clinical Data Repository, an icon is used to indicate external data is available for clinician teams.	Not Enabled
4	HIE is available to clinical teams from external sources (i.e. medications, problem lists, discharge summaries, etc.). Patient data is available only by searching across a National Exchange, State or Regional or Other.	Somewhat Enabled
4	A log of all medications ordered as well as what meds have been administered (eMAR) for the patient is maintained in a patient centric manner and available across the hospital network.	Not Enabled



Stage	EMRAM Criteria	Your Performance
3	Infrastructure for bedside point of care scanning (of medications, blood, etc.) is installed in all locations.	Not Enabled
3	Prescriptions are reviewed and verified by a Pharmacist.	Fully Enabled
3	Computerized orders are implemented with basic clinical decision support functions (i.e. duplicate orders, medication interactions, etc.).	Not Enabled
3	Clinicians have remote access to patient records/patient data/reports (if allowed by policy).	Not Enabled
3	Clinicians access external data sources for educational and training purposes.	Not Enabled
2	Clinicians access results and images through the CDR (Pictures and scans, lab results).	Fully Enabled
2	Clinical Data Repository (CDR) is in place as a single repository (may be compiled as a single vendor solution or multiple software modules acting as a single repository).	Fully Enabled
1	Pharmacy utilizes interactive alerts for medication safety (i.e. duplicate orders, drug interactions, dose errors, etc.).	Not Enabled
1	90%+ Lab (clinical chemistry, microbiology, molecular, etc.) are stored as structured and discrete data and can be leveraged for trending analysis or clinical decision support features.	Fully Enabled
1	90%+ Lab results are stored in a patient centric manner and available across the hospital network.	Fully Enabled
1	90%+ Non-DICOM images are stored in a patient centric manner and available across the hospital network.	Somewhat Enabled
1	90%+ DICOM images are stored in a patient centric manner across the hospital network.	Fully Enabled
1	Cardiology Information System - Requests are manually or electronically entered into the Cardiology system. Reports are matched with the requests and distributed to the ordering physician.	Mostly Enabled
1	Pharmacy Information System - Prescriptions are manually or electronically entered into the Pharmacy system in order to update the stock control inventory.	Fully Enabled
1	Radiology Information System - Requests are manually or electronically entered into the Radiology system. Reports are matched with the requests and distributed to the ordering physician.	Fully Enabled
1	Laboratory Information System - Requests are manually or electronically entered into the laboratory system. Results are matched with the requests and distributed to the ordering physician.	Fully Enabled

Color Legend

Areas for overall EMRAM Stage improvement
Areas for Focus Area Stage improvements
Minimum requirement gap up to EMRAM Stage 7

# Patient Engagement



Patient Engagement is defined as meeting and delivering on individual patient needs, values, and personalized health goals by offering patient's choice of care delivery--including digitally enabled, virtual care visits, telehealth, and/or digitally enabled self-management. Each of these types of care delivery models vary widely across global health systems, but each of these care delivery options engage patients to a varying degree.

Digitally enabled care is defined as offering care options that offer meaningful engagement between providers and patients, supported by robust digitally enabled care environments whereby patient engagement is dynamic, offers patients choice in how they engage and connect with provider teams, and enable data driven decision making. Patient engagement considers a range of digital options (e.g. online tools, handheld devices) for access to care anywhere approaches, or apps that enable on-demand health and wellness care support.

Stage Achievement	0	
Percent Achievement	7%	
Stage 7	1%	Stage not achieved
Stage 6	9%	Stage not achieved
Stage 5	28%	Stage not achieved
Stage 4	0%	Stage not achieved
Stage 3	N/A	Not Applicable
Stage 2	N/A	Not Applicable
Stage 1	N/A	Not Applicable

Color Legend
Stage criteria achieved
70% of stage criteria not met
Minimum requirements not met

## Opportunities

Stage	EMRAM Criteria	Your Performance
7	Prior to patient discharge personalized, structured, and documented care plans are reviewed with the patient and/or associated on-going care facilitators (family members, guardian, or discharged-to care provider) that define personal health goals defined by individual patients in coordination with their care team, informed by their needs, values, and unique life circumstances taking into consideration social determinants of health (SDOH).	Minimally Enabled
7	Using digital apps and online portal patients have real time access to data flows to inform progress towards health goals, offer detailed documentation of care pathway/plan, products used in care (e.g., implants, drugs) to inform decisions to manage their health and wellness.	Not Enabled
7	Secure messaging with clinician teams during inpatient admission is available to meaningfully connect patients to their care team during hospitalization.	Not Enabled
7	Patients can use digital tools/technologies to connect, in real-time, to clinical systems and provider teams, (e.g., with a "point person"/ primary provider/navigator) that they can seek guidance about their health, report outcomes, seek information about care processes during inpatient admissions, and during transitions to outpatient care.	Not Enabled
7	Organization evaluates digital tools and technologies (e.g., wearables, devices, applications) for ease of use for patients, and rates of utilization.	Not Enabled
7	Digital tools and infrastructure track and trace care processes, and products used in care, linked to individual outcomes and progress toward patient health and wellness goals, for all inpatient care settings.	Not Enabled
7	Adverse event reporting is automated (e.g., identifies lot and batch number of individual products to enable global traceability to the vendor), linked to individual patients who report adverse outcomes, track potential risk of adverse outcomes, to support rapid intervention to improve quality and safety outcomes in all care settings.	Not Enabled
7	Personalized digital tools, technologies and platforms (e.g., virtual, online in real time, wearables) support consumer self-management of their health and wellness, and meaningful access to care providers when and where needed using secure messaging/communication.	Not Enabled
7	Patients are able to report outcomes, provide feedback using digital tools during hospital admissions, for all inpatient programs.	Not Enabled
7	Rates of patient reported outcomes (e.g., percent of patients using digital tools for self management who report health outcomes, adverse events, or engage provider teams using digital tools).	Not Enabled
7	Rate of use (e.g., % of Patients) who use digital tools (e.g., mobile devices, smart phone apps, dashboards, tablets) for self management of care, and to report health outcomes is tracked and reported.	Not Enabled
7	Prevalence of patients with chronic conditions accessing their health record across the organization (stated at a percent of patients in a chronic condition registry accessing their health record).	Not Enabled
6	Patients have online access to educational material specific to their imaging-related procedures or problems (e.g., example to inform them about potential risks or benefits of upcoming treatments or imaging procedures).	Not Enabled
6	Patients have online access to radiology and cardiology images created by the organization.	Not Enabled
6	Digital infrastructure tools are designed to support and build consumer health literacy, consumers are provided with the resources, knowledge, and necessary tools to be confident in self-management of their health and wellness.	Not Enabled
6	Patients receive alerts, reminders and notifications remotely, linked to care pathways/care plans to support patient self management decisions to advance progress towards health goals.	Not Enabled
6	Patient satisfaction is measured relative to ease of use of digital tools (e.g., mobile devices, smart phone apps, dashboards, tablets) for self management of care (denominator could be number of discharges per year, patient visits per year, etc.)	Not Enabled
6	Percent of Patients who select/use/access virtual care visits/telehealth appointments. Ability to report the number of virtual care visits over previous 12 months for all areas using virtual care.	Not Enabled
6	Prevalence of patients accessing their health record across the organization is tracked and reported (stated at a percent of all active patients).	Not Enabled
6	Secure messaging is offered to patients in support of communication between the patient and care provider teams.	Not Enabled
6	Patient-specific data collected from wearables, implants, or other digital devices is collected and transformed into knowledge and insights to inform patient and care giver decisions and management of their health and wellness.	Somewhat Enabled
6	Patients can submit self-reported outcomes data and are able to update their personal health status data online (e.g., medication compliance, self-risk assessment, upload medically relevant images), and report progress with care pathways or therapies (e.g., patients can document that they performed the prescribed or recommended action).	Not Enabled
6	A patient portal is available for patients to access a subset of clinical data including discharge status, results, reports, current medication list, education tools/resources, etc.	Minimally Enabled
6	Patient satisfaction is measured using digital tools (e.g., devices, apps, web based portal) to profile the patient experience during hospitalization, discharge.	Somewhat Enabled
5	Patients are able to access their health records across multiple care programs or provider teams.	Minimally Enabled
5	Patients have access to digital tools for monitoring their health status including disease-specific telemonitoring devices (e.g., ECG, blood glucose, scales) for the following conditions: Diabetes, Hypertension, Heart Failure, Chronic Obstructive Pulmonary Disease (COPD), Kidney Failure.	Somewhat Enabled
5	Patients receive post discharge health maintenance reminders using automated notifications and alerts (e.g., patients are reminded of preventative actions such as wound care, follow up visits, and therapeutic appointments or medication re-orders or reminders).	Not Enabled
4	Patients are provided with online access to standardized health related, non-personalized information (e.g., educational content, risk assessments, health education).	Not Enabled

Color Legend
Areas for overall EMRAM Stage improvement
Areas for Focus Area Stage improvements
Minimum requirement gap up to EMRAM Stage 7

# Healthcare Analytics & Outcomes Measurement



Health system performance is optimized when clinical and operational data are transformed into knowledge and insights that inform decisions focused on best possible outcomes for patients, and optimization of performance of the organization. Sustainable and verifiable improvements to health system performance require analytics and outcomes measures to track quality and safety outcomes for patients and operational performance outcomes for the organization. This includes—but is not limited to—clinical, operational, and financial outcomes and impact. Analytics tools are able to transform data into knowledge, wisdom and insights to inform decisions. Outcomes include quality, safety, efficiency, productivity and other operational performance outcomes.

Stage Achievement	1	
Percent Achievement	26%	
Stage 7	29%	Stage not achieved
Stage 6	4%	Stage not achieved
Stage 5	25%	Stage not achieved
Stage 4	41%	Stage not achieved
Stage 3	62%	Stage not achieved
Stage 2	12%	Stage not achieved
Stage 1	75%	Stage achieved

Color Legend
Stage criteria achieved
70% of stage criteria not met
Minimum requirements not met

## Opportunities

Stage	EMRAM Criteria	Your Performance
7	Medication error rates are reported routinely (ex. Quarterly, annually) to program teams to document trending.	Not Enabled
7	Pharmacy: A critical review process for medication errors is well established, analyzed and reported to patient care units to inform practice interventions to strengthen medication safety and quality patient care for all patient care teams.	Not Enabled
7	Pharmacy: Medication errors analyses are reported to board level quality and safety committee to inform decisions to advance quality and safety across the organization.	Not Enabled
7	Pharmacy: Medication errors are reported online, analytics track and trace medication errors linked to outcomes for patients across the organization, and reported to patient care settings regularly.	Not Enabled
7	Pharmacy: Home or Alternative medications the patient brings from home or managed per established policy. In the event medications from home are permitted, are administered (by the nurse or the patient), the medications follow the same process as pharmacy dispensed medications.	Mostly Enabled
7	Pharmacy: Nurses access prescribed medications at the bedside, with technology enabled verification of the correct medication, correct dose, correct patient, correct time, and correct route.	Not Enabled
7	Pharmacy: Technology is used to track and trace medications, received in bulk and then repackaged, maintaining the traceability from manufacturer to patient outcome is well defined and supported by some level of automation.	Minimally Enabled
7	Pharmacy: Clinicians and/or pharmacists have the ability to override a medication prescription (e.g., deemed unsafe, inappropriate). All overrides are reviewed, and analyzed to identify trends or patterns related to factors contributing to overrides and then reported to leadership to inform quality and safety decisions relevant to override processes.	Mostly Enabled
7	Pharmacy: Modified orders or recommendations to modify orders are communicated to the Clinician who ordered the medication, and modification of orders are documented in the EMR for all patient care settings.	Not Enabled
7	Pharmacy: The medication profile (eMAR/EPMA) is automatically updated following prescribing and administering.	Not Enabled
7	Pharmacy: Systems in place to reduce medication errors (wrong dose, route, time, mislabel if repackaged, wrong storage location, etc.) with harm and prescribing, administration, delivery.	Somewhat Enabled
7	Pharmacy: All medication orders are digitally verified by appropriate licensed professional prior to being dispensed.	Mostly Enabled
7	Imaging: Enterprise Imaging is accomplished. Defined as "a set of strategies, initiatives and workflows implemented across a healthcare enterprise to consistently and optimally capture, index, manage, store, distribute, view, exchange, and analyze all clinical imaging and multimedia content to enhance the electronic health record.	Mostly Enabled
7	Imaging: The organization is able to demonstrate Clinical Decision Support Features for Radiology and Cardiology imaging that help to improve efficiency, safety, or quality of care.	Somewhat Enabled
7	Imaging: Radiation doses are regularly monitored to ensure minimum dose per examination.	Somewhat Enabled
7	Imaging: Specialists have the option of using speech recognition for capturing imaging analysis and reporting.	Mostly Enabled
7	Imaging: Important findings are captured as discrete data elements (e.g., size of a potentially malignant mass) and transferred automatically into reports.	Not Enabled
7	Imaging: The software enables the prioritization of radiology and cardiology imaging examinations/reviews based on urgency in order to minimize the turnaround time for reports.	Mostly Enabled
7	Imaging: Authorized clinical users from the organization (inpatient and outpatient areas) can access and view radiology and cardiology images through their primary system.	Mostly Enabled
7	Imaging: Non-DICOM images/videos are stored and digitally available for clinician access (e.g., images/videos in formats such as PDF, MPEG, JPEG, AVI, PNG, generated by devices like digital cameras, smartphones, endoscopes etc.).	Mostly Enabled
7	Imaging: The electronic system supports the confirmation of image acquisition/examination completion and automated results delivery to the responsible clinician. (i.e. orders and results communication / status management).	Mostly Enabled
7	Imaging: All orders are exchanged and accessed electronically, whereby orders are verified prior to the patient undergoing the procedure.	Mostly Enabled
7	Blood Bank: Blood stored outside the blood bank is managed by the blood bank and associated standards applied to map the blood order to the patient and the blood product.	Somewhat Enabled
7	Blood Bank: If the blood needs to be repackaged (NICU) a process is in place to ensure the repackaging has the same identifies as the original product package.	Somewhat Enabled
7	Blood Bank: The Blood Bank processes enable linkage of blood product administration to patient outcomes for all patient care areas. Ability to report the number of error without harm and errors with harm for the past 12 months.	Mostly Enabled
7	Blood Bank: Technology is used to link the patient order to the right blood product (e.g., scan the blood product barcode, QR code, RFID tag, etc.). The rate of error of blood product matching to patient order is tracked for all patient care programs.	Mostly Enabled
7	Laboratory: Technology is used to match the specimen/sample with the patient order (e.g., scanned upon receiving) to document timely processing of lab samples. The rate of "re-draws" (repetition of specimen collection due to delays e.g., delayed receipt of specimens, coagulation of blood specimens, inconclusive results) is tracked and monitored for quality improvements for all patient care programs.	Mostly Enabled
7	Lab: Specimen/sample are identified and tracked at the point of collection using technology-enabled data capture (e.g., barcoded, QR coded, RFID tagged, etc.) at the processes at the point of collection.	Fully Enabled
7	Clinicians can access medical imaging reports and actual images from within the patient's EMR either natively or through a context aware link for all patient care programs.	Not Enabled
7	Clinicians receive actionable alerts to enable proactive interventions to reduce risks.	Not Enabled
7	Structured templates use discrete data to drive CDS or order sets, and populates the CDR as discrete data for all patient care programs.	Not Enabled
7	Clinicians have input to the design and use of structured templates to document discharge summaries.	Somewhat Enabled
7	Nursing risk assessments inform care delivery to ensure patients assessed at high risk receive preventive care to reduce risk and patients assessed at low risk receive care appropriate to low risk care needs. Care delivery is standardized to ensure risks are mitigated.	Not Enabled
7	Clinicians have input to the design and use of structured templates to document consult notes.	Minimally Enabled
7	Clinicians have input to the design and use of structured templates to document history & physicals.	Somewhat Enabled
7	Clinicians have input to the design and use of structured templates to document operative notes for all procedures.	Somewhat Enabled
7	Clinicians use structured templates to document daily progress notes for all patient care programs.	Not Enabled

Stage	EMRAM Criteria	Your Performance
7	Clinician documentation uses structured templates for all patient care programs to ensure complete, accurate documentation of Clinician's care for patients.	Minimally Enabled
7	Evidence based order sets (self-developed or third-party developed specifically for this organization) are evaluated by clinician leaders for quality and safety outcomes, and to personalize pathways to support quality outcomes.	Somewhat Enabled
7	Clinicians are able to enter orders remotely, unless not allowed by organization policy. Prevalence of remote Clinicians' order are:	Not Enabled
7	The organization has implemented Clinical Order Management for the entry of all patient care orders in all care delivery programs.	Not Enabled
7	Nurses may chart resuscitation medications on paper, but document the medications administered in the eMAR record by the time the patient is transferred to another unit (e.g., ICU).	Minimally Enabled
7	Ancillary clinical disciplines also chart in the system: pastoral care, occupational therapy, respiratory therapy, physiotherapy, social work, mental health teams, home care, long term care liaison staff.	Not Enabled
7	Medication reconciliation processes occurs at admission, discharge and all unit level transfers, including reconciliation with home medications to be taken/resumed after discharge.	Somewhat Enabled
7	Nurses complete documentation in the EMR for all of the following: vital signs (verified by nurse if monitors are interfaced), flow sheets (fluid balance, blood administration), nursing notes, risk assessments, care plans- nursing diagnoses, electronic medication administration records (eMAR).	Not Enabled
7	Medications are given in accordance with previously agreed group protocol clinical pathways or order sets. (e.g., simple analgesia, anticoagulants in VTE assessment, and pre-operative antibiotics.)	Somewhat Enabled
7	Medication errors are reported by members of the care team and monitored by clinician leadership (or quality and safety teams) routinely for all clinical programs to inform quality and safety initiatives related to medication safety.	Minimally Enabled
7	All situations of overriding the eMAR are documented in all clinical settings with a discrete override justification required.	Minimally Enabled
7	All medications administered to patients are verified in the eMAR at the point of care and automatically captured in the patient's medication profile is updated.	Minimally Enabled
7	At the bedside, all nurses use technology to identify the patient and the medicine (all medicine types) and in so doing create a match confirming at least 5 rights of medication administration. Alerts and warnings signify mismatch.	Minimally Enabled
7	A program is in place to track clinician use of the EMR to improve efficiency, reduce time and increase effectiveness.	Not Enabled
7	Histology/anatomical pathology is in place replacing glass specimen slides with information generated from digitized specimen slides.	Not Enabled
7	Infant formula ordered in the NICU is scanned at bed side to verify the product matches the nutritional needs of the order prior to feeding.	Not Enabled
7	An anesthesia information system is live, in use, and interfaced with the EMR.	Not Enabled
7	Smart pumps are interfaced directly to the EMR using a bi-directional interface.	Not Enabled
7	Nursing assessments and care plans are supported by bedside scanning to automate data capture. (e.g., barcode or RFID scanning of blood glucose monitor, ABG machines, special mattress, infusion pumps, etc.)	Minimally Enabled
7	A Procedural Suite Time-Out process is in place to ensure patient safety.	Somewhat Enabled
7	Clinical Governance processes use data to manage workflow, content, alerts and the impact and burden of work on all members of clinical staff.	Somewhat Enabled
7	Clinically relevant paper (e.g., EKG strip documentation, Code documentation) is scanned and available in the EMR within 24 hours from the time it was created.	Not Enabled
7	Data governance strategy is evaluated annually for privacy, security, and integrity of data to support tracking and monitoring patient outcomes for all clinical programs, and organizational performance.	Minimally Enabled
7	There is executive agreement for a documented analytics strategy that enables and drives outcomes for all strategic programs.	Minimally Enabled
7	Advanced analytics is used to track patient progress outcomes and proactively identify and inform decisions to reduce risks. Examples may include: Sepsis, Readmission risks based on vitals and/or lab results.	Not Enabled
7	Staff has access to self-service data presentation tools (e.g., report writers, department level dashboards, and personalized health pathway) that enable tracking health outcomes for patients and clinician teams.	Not Enabled
7	Demonstrated data mobilization strategy tracks outcomes related to quality, patient safety, and cost for all programs.	Not Enabled
7	Tracking patient outcomes informs decisions to personalize care delivery to strengthen patient's progress towards health goals and desired outcomes.	Minimally Enabled
7	Data mobilization proactively identify risks to patients and provide automated alerts to cue clinician teams to intervene to reduce risks and strengthen outcomes.	Minimally Enabled
7	Data from external sources (e.g., patients – wearables, digital tools, professional society registries, health plan data, quality of work life data for staff, patient reported outcomes data) is mobilized and integrated into analyses to document patient level and program level outcomes to track performance.	Not Enabled
7	Advanced data analytics is used to improve the clinical outcomes for patient suffering from one or more chronic condition.	Not Enabled
7	Data is used to measure performance across all strategic platforms (ex quality improvement performance, cost impact improvement).	Not Enabled
7	Improved outcomes are documented in 3 case studies which are data driven, capturing clear definition of outcomes in the case, evidence of the importance and relevance of selected outcomes, and data that profiles the impact and value of case interventions for patients, for the workforce, and the organization when interventions to improve or strengthen performance are implemented.	Not Enabled
6	Data management processes include strategies to strengthen validity (e.g., data are normalized to include the value and normal range for data, date standardization, etc.)	Not Enabled
6	Operational and Finance data is used to track the performance of clinical outcome indicators. E.g., The organization understands the cost and length of stay implications of reducing hospital acquired infection.	Minimally Enabled
6	Outcome-associated risks are tracked to inform quality and safety priorities within service improvement programs. (e.g., extended patient waiting times in the ER.)	Somewhat Enabled
6	Nurses and Allied Health professionals receive electronic alerts and warnings that prevent potential harm. (e.g., Change foley catheter, resite peripheral line, check central line dressing)	Not Enabled
6	Clinical Governance Committee is formed and works closely with Data Governance to optimize capture of clinical care outcomes to identify quality and safety priorities.	Not Enabled
6	Analytics reports are available in a common repository and available to frontline staff as needed per access policy.	Not Enabled
6	Analytics governance actively assesses Outcomes data for needed changes.	Not Enabled
6	Outcomes data quality is managed (timeliness, completeness and accuracy) by clinical, operational and financial leaders.	Not Enabled
6	Readmission rates are monitored for all patient conditions (trend over a 12-month period.)	Not Enabled
6	Rates of Never events/Sentinel events across the organization, and trend over a 12-month period. (e.g., wrong site surgery, administration of medication by wrong route, transfusion/transplant incompatibility).	Not Enabled
6	Rates of adverse events associated with high risk care processes are tracked for the following: anticoagulation errors/adverse events, insulin errors/adverse events, conscious sedation errors/adverse events, incorrect blood product use, antidote use, Intravenous medication errors/adverse events.	Not Enabled
6	Clinical errors that occur in specialist Ambulatory Services (e.g., dialysis, infusion centers) are electronically recorded and displayed as a 12 month rolling trend.	Not Enabled
6	Rates of adverse events (medical error, all types) /patient day (inpatients), and trending over a 12-month period.	Not Enabled
6	Organization can report the rates of patient access to care based on type of access - telehealth, virtual visits, in person visits, or online services.	Not Enabled
6	Rates of patient access to provider appointments (e.g., Online, virtual, telehealth, in person) within 24 hours.	Not Enabled
5	Analytics governance has defined Outcomes data captured...numerators, denominators, multi-source data points resolved.	Not Enabled
5	The effectiveness of Order Sets, personalized templates and structured narrative is reviewed by a clinical governance committee.	Not Enabled
5	Patient Satisfaction targets inform service improvement programs in each clinical area e.g., Surgery, Medicine, Inpatient, Outpatient.	Not Enabled
5	Clinical programs have established program target outcomes and report against those targets annually.	Mostly Enabled
4	Clinical governance committee has a process to assess the effectiveness of and compliance with order sets and clinical decision support guidance.	Minimally Enabled
4	Patient Satisfaction targets are identified for each clinical program, and or for specific patient populations segments e.g., inpatients, day cases, outpatients, emergency room.	Somewhat Enabled
4	Clinical governance committee has a process in place to identify and measure clinical outcomes.	Somewhat Enabled
3	Clinical governance committee continually assess the effectiveness of Clinical Decision Support opportunities.	Somewhat Enabled
3	Activity reports are available at department, division and corporate levels. For example: Emergency Department, Division of Surgery, Hospital.	Mostly Enabled
2	Policy and Procedures to control document scanning are defined by committees. (Multi-disciplinary groups)	Not Enabled
2	Policy and Procedures to control bedside scanning are developed by multi-disciplinary groups.	Not Enabled
2	Clinical decision support opportunities are defined by committees (Multi-disciplinary groups).	Somewhat Enabled
1	Departments are reporting on their own operational and financial performance.	Mostly Enabled

#### Color Legend

Areas for overall EMRAM Stage improvement

Areas for Focus Area Stage improvements

Minimum requirement gap up to EMRAM Stage 7

# Resilience Management



Resilience Management deals with the protection of information technology against unauthorized access to, or modification of information--whether in storage, processing, or transit and against the denial of service attacks that prevent authorized users from accessing the network and systems, including those measures necessary to detect, document, and counter such threats. It also deals with the protection and maintenance of data confidentiality, integrity, availability, and accountability. The tools used to enable Resilience Management capabilities may include encryption, firewalls, single sign-on, spam/spyware filters, anti-virus/antimalware applications, etc.

Stage Achievement	0	
Percent Achievement	17%	
Stage 7	0%	Stage not achieved
Stage 6	17%	Stage not achieved
Stage 5	25%	Stage not achieved
Stage 4	20%	Stage not achieved
Stage 3	45%	Stage not achieved
Stage 2	27%	Stage not achieved
Stage 1	0%	Stage not achieved

Color Legend
Stage criteria achieved
70% of stage criteria not met
Minimum requirements not met

## Opportunities

Stage	EMRAM Criteria	Your Performance
7	Service interruptions that cause the creation of downtime documentation are measured by the number of downtime documents scanned into the EMR.	Not Enabled
7	A communication plan clearly outlines when to, or not to, implement downtime procedures.	Not Enabled
7	The organization performs a simulated disaster event annually. The simulation must include downtime clinical documentation and recovery of data created during the downtime. This simulation does not affect the production environment.	Not Enabled
7	Demonstrated long-term downtime processes describe what the organization does in the event of a downtime, informed by documented guidelines for extended downtimes.	Not Enabled
7	Frequency of unscheduled outages are measured annually (i.e. has been measured over the past 12 months). An outage is determined when a clinician must resort to using paper to document care. That paper must then be scanned into the EMR and any orders backloaded.	Not Enabled
6	Simulated Disaster Recovery events are conducted and lessons learned are implemented into protocols to manage downtime.	Not Enabled
6	The organization manages clinical data integrity during and following a system outage by backloading clinical data into the EMR and the disposition of any clinically relevant paper.	Not Enabled
6	Staff demonstrate awareness of downtime processes and available IT resources during downtimes. The organization evaluates the impact of downtime on staff and clinician teams.	Minimally Enabled
6	Summary reports are available on a device on the wards / floors when the system is down – PC/workstations on a generator circuit or UPS and direct connected to a printer on a generator circuit or UPS.	Somewhat Enabled
6	Patient Data integrity is maintained during downtime using summary reports including patient allergies, medication profile, patient problem/diagnosis, department schedules, other.	Somewhat Enabled
6	Patient data is encrypted on the downtime PC and password protected.	Minimally Enabled
6	Outages are standardized for both scheduled and unscheduled disruptions in information systems. Disruptions are defined (e.g., planned, unplanned), reported, and tracked by organizational leaders. A mature process is in place defining time interval before paper and recovery sequence.	Not Enabled
6	To maintain patient safety the IT Change Management process ensures that all new devices and software modifications are risk assessed and authorized for use by the clinical safety officer.	Not Enabled
6	There is a process to effectively communicate system changes, based on impact and relevance, to all users. (Training if required is automatically scheduled and registries updated.)	Not Enabled
6	Information assets (network devices, software, interfaces, etc.) are proactively managed across the enterprise. An assessment is performed annually to identify risks to the infrastructure. The risk assessment and any issues identified by monitoring are escalated.	Minimally Enabled
6	Staff understand the Business Continuity plan and participate in, at a minimum, a disaster drill that simulates an enterprise wide outage of all systems every 12 months.	Not Enabled
6	Bring your own device policy is agreed, implemented and reviewed every 12 months.	Minimally Enabled
5	Business Continuity policy contains Root Cause Analysis templates and lessons learned reports.	Not Enabled
5	IT Change Management - Changes are coordinated (non-emergency) across all platforms with regression testing.	Minimally Enabled
5	Intruder Prevention Systems manage unauthorized access to the hospital network, servers and records.	Somewhat Enabled
5	A security policy is in place for devices that are reported as lost or stolen (i.e. phone, laptop, PCs, tablets, etc.).	Minimally Enabled
4	Network Intruder detection system in place.	Somewhat Enabled
4	There is a plan in place to ensure that following an outage services can be fully restored.	Not Enabled
4	A communication plan is in place for unscheduled downtime that describes who is to be notified, the scope of the outage and the possible duration of the outage.	Not Enabled
4	IT Change Management - Change Advisory Board (CAB) has Root Cause Analysis for failed changes that were approved by the CAB in place.	Not Enabled
3	An annual program of scheduled outages is published and widely communicated. (To describe impact and duration.)	Not Enabled
3	IT Change Management - Change Advisory Board is defined and implemented to define changes that are to be reviewed by the CAB and those that are not. All changes that should be reviewed are approved by the CAB before the requested changes.	Not Enabled
3	Role Based Access Control (appropriate access to information systems is based on staff role).	Mostly Enabled
2	Communications associated with Business Continuity (the process of moving from Uptime to Downtime) are aligned with the organization's major incident plan.	Minimally Enabled
2	A systematic methodology is agreed in consultation with key stakeholders in order to prioritize system recovery routines.	Minimally Enabled
2	Change Management requests are classified as routine, standard and emergency and are made and available online. In order to obtain approval all requests for change must have a roll-back plan.	Minimally Enabled
2	Annual training on the use of PHI and IT security is provided to all members of staff.	Minimally Enabled
2	Policies for Appropriate Use and access to patient health information are in place.	Somewhat Enabled
1	Requests for change go through an approval process involving key clinical stakeholders.	Not Enabled
1	Business Continuity plans are in place for each departmental / ancillary system.	Not Enabled
1	Change Management requests are classified as routine, standard and emergency and are made and available online.	Not Enabled

Color Legend
Areas for overall EMRAM Stage improvement
Areas for Focus Area Stage improvements
Minimum requirement gap up to EMRAM Stage 7

# Clinical User Adoption

A single Electronic Medical Record / Clinical Data Repository is installed or other multiple data stores installed in such a way that users do not have to sign in to different systems.

The organization understands that multiple solutions are typically leveraged to form the EMR. Linkages from the Electronic Medical Record / Clinical Data Repository are context aware (i.e., patient does not need to be re-selected in each disparate data store). There is a controlled medical vocabulary to ensure systems are speaking the same language. Basic interoperability enabled by HL7 or other standards providing access to 95%+ of lab results, radiology and cardiology images and reports. This information is also available outside the organization.

Stage Achievement	1	
Percent Achievement	39%	
Stage 7	10%	Stage not achieved
Stage 6	18%	Stage not achieved
Stage 5	25%	Stage not achieved
Stage 4	40%	Stage not achieved
Stage 3	87%	Stage not achieved
Stage 2	75%	Stage not achieved
Stage 1	100%	Stage achieved

Color Legend
Stage criteria achieved
70% of stage criteria not met
Minimum requirements not met

## Opportunities

Stage	EMRAM Criteria	Your Performance
7	95%+ of procedures use a pre-procedure Time-Out/checklist process to ensure right patient/right procedure.	26-49%
7	95%+ of Human Milk administrations are electronically scanned (i.e. Barcode, RFID scanned) at the bedside prior to administration.	0%
7	95%+ of Blood Products are electronically scanned (i.e. Barcode, RFID scanned) at the bedside prior to administration.	0%
7	95%+ of Medications are electronically scanned (i.e. Barcode, RFID scanned) at the bedside prior to administration.	0%
7	95%+ of Specimen Collections are electronically identified (i.e. Barcode, RFID scanned) at the point of collection.	0%
6	50%+ of procedures use a pre-procedure Time-Out/checklist process to ensure right patient/right procedure.	26-49%
6	50%+ of Human Milk administrations are electronically scanned (i.e. Barcode, RFID scanned) at the bedside prior to administration.	0%
6	50%+ of Blood Products are electronically scanned (i.e. Barcode, RFID scanned) at the bedside prior to administration.	0%
6	50%+ of Medications are electronically scanned (i.e. Barcode, RFID scanned) at the bedside prior to administration.	0%
6	50%+ of Specimen Collections are electronically identified (i.e. Barcode, RFID scanned) at the point of collection.	0%
6	90%+ of Clinical Documentation is recorded as structured data (not free text) and available in the Clinical Data Repository.	26-50%
6	CPOE is implemented and adopted in >90%+ clinical programs.	26-50%
5	>25% of procedures use a pre-procedure Time-Out/checklist process to ensure right patient/right procedure.	26-49%
5	>25% of Human Milk administrations are electronically scanned (i.e. Barcode, RFID scanned) at the bedside prior to administration.	0%
5	>25% of Blood Products are electronically scanned (i.e. Barcode, RFID scanned) at the bedside prior to administration.	0%
5	>25% of Medications are electronically scanned (i.e. Barcode, RFID scanned) at the bedside prior to administration.	0%
5	>25% of Specimen Collections are electronically identified (i.e. Barcode, RFID scanned) at the point of collection.	0%
5	75%+ of Clinical Documentation is recorded as structured data (not free text) and available in the Clinical Data Repository.	26-50%
5	CPOE is implemented and adopted in >75%+ clinical programs.	26-50%
4	>50% of Clinical Documentation is recorded as structured data (not free text) and available in the Clinical Data Repository.	26-50%
4	CPOE is implemented and adopted in >50% clinical programs.	26-50%
3	>25% of Clinical Documentation is recorded as structured data (not free text) and available in the Clinical Data Repository.	26-50%
3	CPOE is implemented and adopted in >25% clinical programs.	26-50%
3	95%+ of DICOM and Non-DICOM images are stored and available through the CDR to clinicians.	95-100%
3	95%+ of Lab, Radiology and Cardiology reports are stored and available to clinicians in the Clinical Data Repository (CDR).	26-49%
2	50%+ of DICOM and Non-DICOM images are stored and available through the CDR to clinicians.	95-100%
2	50%+ of Lab, Radiology and Cardiology reports are stored and available to clinicians in the Clinical Data Repository (CDR).	26-49%
1	>25% of DICOM and Non-DICOM images are stored and available through the CDR to clinicians.	95-100%
1	>25% of Lab, Radiology and Cardiology reports are stored and available to clinicians in the Clinical Data Repository (CDR).	26-49%

Color Legend
Areas for overall EMRAM Stage improvement
Areas for Focus Area Stage improvements
Minimum requirement gap up to EMRAM Stage 7



# Contacts

Customer Service  
[customerservice@himss.org](mailto:customerservice@himss.org)