EMRAM

HIMSS SOLUTION

The HIMSS Electronic Medical Records Adoption Model (EMRAM) incorporates methodology and algorithms to score acute care institutions and their affiliated ambulatory care settings around the world relative to their digital maturity.

The stages of the model are as follows:

Stage 7

Improve Patient Safety - Evaluate and improve patient safety at your acute facilities by optimizing your EMR implementation to provide access to critical information when and where clinicians need it.

Increase Patient Satisfaction - Reduce time and errors in care delivery and see increased patient satisfaction. Enhance care delivery by having the right information at the right time for both the patient and the clinician.
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 for data security are critical components of a successful EMR implementation. The EMRAM guides the organization in policymaking for the appropriate use of the data the EMR stores and the level of access available to clinician teams and others within the organization.

Stage 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.

Patient satisfaction is measured using automated digital tools (e.g., devices, apps, web based portal) to profile the patient experience during hospitalization. Patients are able to access a subset of clinical data: Discharge status, education. 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).

Analytics governance actively assesses outcomes data for needed changes, available in a common repository. Rates of adverse events (medical error, all types) /patient day (inpatients), and trending over a 12-month period. 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. Rates of "Never Events" across the organization, and trend over a 12-month period. Medical devices are integrated into EMR (e.g., monitoring devices) in ICUs.

Clinical Governance Committee is formed and works closely with Data Governance to optimize capture of clinical care outcomes to identify quality and safety priorities.

Stage 5

More the 75 percent of clinical documentation is created using online tools and available to the clinical team members in the Clinical Data Repository. More than 25 percent of medications are electronically identified at the bedside. Tracking timeliness of nursing care (e.g., timed medication orders) to examine workflow efficiency and productivity, and care quality. The electronic system continuously monitors at least one patient condition, such as vital signs or laboratory values, in order to automatically alert care team members about risks of patient health status deterioration.

HIE enables documents from external sources to be integrated into the Clinical Data Repository, an icon is used to indicate external data is available for clinician teams.

Emergency situations/cases have a defined documentation strategy to verify accuracy of care interventions. Secure texting in place between clinicians to enable team communications and collaboration. Bidirectional interfaces are in place to external HIE for both inbound and outbound updates. Care teams offer/provide telehealth (e.g., telephone based monitoring, care navigation) to support patient surveillance, consultation and treatment both prior to admission and post discharge.

Clinical governance assesses effectiveness of CPOE and approves changes to workflow to improve staff efficiencies. Clinical outcome targets are measured and used to prioritize changes. Patient satisfaction targets inform service improvement programs in each clinical area e.g., surgery, medicine, inpatient, outpatient.

Data analytics governance has defined outcomes data captured - numerators, denominators, multi-source data points resolved.

Stage 4

More than 50 percent of all medical orders are placed using Computerized Practitioner Order Entry (CPOE) by any clinician licensed to create orders. CPOE is supported by a clinical decision support (CDS) rules engine for rudimentary conflict checking, and orders are added to the nursing and CDR environment. Clinical outcome targets are identified in selected areas e.g., disease groups, clinical procedures and operational services.

More than 50% of all clinical documentation is created using online tools and available to the clinical team members in the Clinical Data Repository. Where publicly available, clinicians have access to a national or regional patient database to support decision making (e.g., medications, images, immunizations, lab results, etc.).

During EMR downtimes, clinicians have access to patient allergies, problem/diagnosis list, medications, and lab results.

Patient satisfaction targets are identified for each clinical program, and/or for specific patient populations segments e.g., inpatients, day cases, outpatients, emergency room.

Clinical governance committee assesses effectiveness of computerized orders and order sets e.g., efficacy, usability and compliance.

Stage 3

More than 25 percent of clinical documentation is created using online tools and available to the clinical team members in the Clinical Data Repository. An Electronic Medication Administration Record application (eMAR) is implemented for all medications.

Access to external data sources (e.g., educational materials for clinician reference, regional or national systems, registries, immunizations and vaccination systems), available to clinicians. Clinicians have remote access to patient records (if allowed by policy).

Infrastructure for bedside point of care scanning is planned or is installed in some but not all locations. Clinical governance committee has a process to review and update Clinical Decision Support opportunities.

Role Based Access Control (manage appropriate access based on staff role).

Scheduled outages are communicated including areas impacted and duration. Preparation plans are defined for moving into downtime and recovery.

Stage 2

Clinicians have access to CDR for results review. A clinical governance committee is formed to begin defining workflow and Clinical Decision Support objectives. Policy and procedures for bedside scanning, specimen collection, blood administration and scanning of clinically relevant paper are in place. Appropriate use, security training policies are defined.

IT Change Management includes a review of proposed changes and have a rollback plan before the change is made. Applications are prioritized by criticality (high, medium, low or similar) for business continuity.

Stage 1

All major ancillary clinical systems are installed. The Clinical Data Repository has more than 90% of lab data available for trending analysis and Clinical Decision Support. In addition, the CDR has more than 90% of all DICOM and non-DICOM images stored in a patient centric manner and available across the hospital network with a minimum of 25% available to clinicians online.

Business Resilience plans are in place for each ancillary system describing how to communicate the scope and duration of the outages and the process to distribute results as needed.

Stage 0

The organization has not installed all of the key ancillary department systems (laboratory, pharmacy, cardiology, radiology, etc).

For more information visit: www.himssanalytics.org/EMRAM

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