The HIMSS Analytics Ambulatory Electronic Medical Record Adoption ModelSM (A-EMRAM) incorporates methodology and algorithms to automatically score clinic sites on the maturity of their electronic medical record (EMR) environments. The A-EMRAM is applicable in ambulatory clinic settings where a patient engages with a care giver who is licensed to assess, diagnose, treat, prescribe and generate orders and documentation.

The A-EMRAM tracks a clinic’s level of health IT adoption from a paper-based environment to a paperless environment with a complete patient record online. The EMR is expected to have interfaces to some office-based intelligent medical devices, strong patient engagement activities, and population health monitoring. A-EMRAM scores allow for peer comparisons and help clinics identify a path to achieving a paperless environment.

**Stage 0**

**Paper-based chart**

- No EMR at all
- Could have a practice management system for billing, but no EMR
- Paper charts are the only means of storing and accessing clinical information (even if there is a computerized billing system)
- Physician notes are still handwritten
- The internet is not routinely used for clinical information; much of the information is obtained with phone calls to hospitals and the use of faxed or courier delivered results

**Stage 1**

**Access to Clinical information, Unstructured Data, Multiple Data Sources**

- The first use of computers for access to information, but the information is not yet stored in a patient centric Clinical Data Repository (proxy for EMR)
- Multiple data sources searched with no permanent patient record stored electronically – paper based
- Electronic storage of chart notes after transcription, but notes are only free text, not structured
- Access to hospital’s EMR for viewing
- Electronic access on physician and/or nurse desktops to online reference material (e.g. eligibility information, lab results)
Stage 2
CDR, Access to Results from Outside Facilities

- The first appearance of a patient centric CDR for core EMR functionality and data storage
  Electronic access to data for results review is available within the EMR, scanned or linked, from an
  outside facility (e.g. hospital, laboratory, or diagnostic imaging center)
- Computers may be at point-of-care for use by nurses in charting or order entry (O/E), but use is
  partial or optional
- Most nurse charting and O/E is at a central location, not in exam room

Stage 3
e-Prescribing, Nursing Documentation, Medication
Reconciliation, CDS

- Electronic charting includes vitals, nursing intake assessment, encounter procedures, etc.
  completed in exam room
- Problem lists, e-prescribing for new & refill required
  - ePrescribing supported by CDSS for new medications and refills
  - All medications on-line to support Med Reconciliation
- Reminders to staff pertaining to patients (not to patients directly)
- Physician notes are dictation/ transcription or VR with text results scanned to chart with link

Stage 4
CPOE, Physician Documentation with CDS, External Data
Exchange

- CPOE and physician documentation with the use of structured templates required; appropriate CDS
  for health maintenance alerts, pharmaceuticals, Dx to order logic, etc.
- Inbound lab results stored as discrete data
- Clinical charting of vitals can lead to electronic growth charts
- Textual/data results returned electronically in formats such as PDF, CCR, and CCD, and then
  attached to patient record
  - Links to in-office results such as EKG waveform, images
- HIE & external reporting to state/regional immunization registries and for syndromic surveillance
  data in the format required by the agency
- Ability to manage drug recalls
Stage 5
Patient Engagement, Online Tethered Patient Portal

- Offering a Patient Portal; secure communication with provider available
  - Portal offers:
    - PHR
    - Bill pay
    - Schedule request
    - Patient specific educational content
    - Ability to take personal action on health based on provider initiatives
    - Summary record electronically upon request

Stage 6
Advanced CDS, Proactive Care Management, Population Health Management

- Advanced CDSS support
  - Protocols
  - Preventive care reminders based on diagnoses, results
  - Orders
  - Immunization reminders
- Follow-up notices sent to patients based on rules
- Population health analytics present
- Diagnostic results can trigger rules and alerts

Stage 7
HIE, Sharing of Data between the EMR and Community-Based EHR; C&BI is strong

- Capability for an interconnected multi-vendor community of physicians, hospitals, lab companies, health plans, imaging companies and patients to easily share and exchange information
  - Some HIE expected
- ≥95% CPOE, including protocol orders
- Data mining capability with compliance reporting
- Capability for medical device recall management
- Objective data will be derived from the survey which will point to “Stage 7 candidates”
  - Final approval of Stage 7 upon on-site validation
  - Please reference the Stage 7 Reviewers guide