HIMSS Analytics®

EMRAM Criteria Update

Presented by:
John H. Daniels, GVP, HIMSS Analytics
Philip Bradley, North America Regional Director, HIMSS Analytics

HIMSS17

HIMSS Analytics®

Enabling better health through information technology.

EMRAM Criteria Update – Effective 1 January 2018

STAGE	HIMSS Analytics EMRAM EMR Adoption Model Cumulative Capabilities
7	Complete EMR: external HIE, data analytics, governance, disaster recovery, privacy and security
6	Technology enabled medication, blood products, and human milk administration; risk reporting
5	Physician documentation using structured templates; full CDS; intrusion/device protection
4	CPOE; CDS (clinical protocols); Nursing and allied health documentation; basic business continuity
3	Nursing and allied health documentation; eMAR; role-based security
2	CDR; Internal interoperability; basic security
1	Ancillaries - Lab, Rad, Pharmacy, PACS for DICOM & Non-DICOM - All Installed
0	All Three Ancillaries Not Installed

HIMSS Analytics®

Topics

What is driving the change?

Highlights – what is new?

Logistics – what has been done & what is left to do?

What's Driving the Change?

EMR Adoption Model - 2005

Stage 7	Complete EMR; CCD transactions to share data; Data warehousing; Data continuity with ED, ambulatory, OP
Stage 6	Physician documentation (structured templates), full CDSS (variance & compliance), full R-PACS
Stage 5	Closed loop medication administration
Stage 4	CPOE, Clinical Decision Support (clinical protocols)
Stage 3	Nursing/clinical documentation (flow sheets), CDSS (error checking), PACS available outside Radiology
Stage 2	CDR, Controlled Medical Vocabulary, CDS, may have Document Imaging; HIE capable
Stage 1	Ancillaries – Lab, Rad, Pharmacy – All Installed
Stage 0	All Three Ancillaries Not Installed

HIMSS Analytics®

Why Update the Acute Care EMRAM?

Minor updates in 2014 & 2015

It is time for more significant changes

- To reflect the current state of an advanced EMR environment
- All stages are affected
- Time to raise the bar globally

Focus more on *functions accomplished* and less on technology itself

- How technology is used to improve care quality and patient safety?

Highlights of the Changes

Stage 1 – Main Diagnostic Systems Results On-Line

Current Requirements

- Does have all three:
  - Radiology information system, and
  - Laboratory information system, and
  - Pharmacy information system

Note: There has never been a definition of what is in a pharmacy information system … in the US it has included Clinical Decision Support … we do not see that in Europe …

Note: We do not define which portions of a Laboratory Information System are present: Chemistry, anatomic pathology, etc.

Updated Requirements

- Does have all four:
  - Radiology information system,
  - Laboratory information system,
  - Pharmacy management system, and

✓ **PACS for DICOM**

✓ **Patient centric storage of Non-DICOM images**

New or changed requirements are noted with a ✓

HIMSS Analytics®

Stage 2 – Core Clinical Data Store

Current Requirements

- Clinical Data Repository (CDR) is installed and is fed by major ancillary systems
- CDR contains a controlled medical vocabulary
- Clinical Decision Support for basic conflict checking is present
- Internal interoperability exists

Updated Requirements

- Clinical Data Repository installed or other multiple data stores installed in such a way that users DO NOT have to sign into different systems
- Such linkages are context aware (i.e., patient does not need to be re-selected in each disparate data store)

✓ **Security: Description of data center security & user security training**

✓ **Description of encryption & disposal policy**

✓ **Description of antivirus, antimalware & firewall program**

- All other requirements remain consistent

HIMSS Analytics®

Stage 3 – Care Documentation is On-Line

Current Requirements

- Has “classic” order entry
- Nursing documentation: vitals, nursing notes, nursing tasks, e-MAR, etc. available for at least one inpatient service
- eMAR is implemented
- First level Clinical Decision Support implemented (i.e., drug/drug, drug/food, etc.)
- Image access from PACS available to physicians outside Radiology department

Updated Requirements

- ✓ **Documentation typically performed by nursing is on-line such as: admission processing, H&P, care documentation, nursing orders & tasks related to Dx & procedure, e-MAR, discharge planning etc.**
- ✓ **Routine Allied Health documentation completed on-line**
- ✓ **>50% criteria for all wards/ patient days/ inpatient cases – client chose % method**
- ✓ **It must also be live in the ED, if any**
- ✓ **Security: Role-based access control (RBAC) is in place**
- ✓ **Description of intrusion detection program**
- Other criteria is unchanged

HIMSS Analytics®

Stage 4 – Physician Orders Are On-Line

Current Requirements

- CPOE used by any clinician with second level clinical decision support capabilities related to evidenced-based pathways & protocols
- CPOE implemented with physicians entering orders in at least one inpatient service area

Updated Requirements

- ✓ **CPOE usage criteria set at >50% (Use same metric previously used)**
- ✓ **CPOE live in the ED, if any**
- ✓ **Documentation by nursing & allied health usage criteria increases to 90%**
- ✓ **Where publically available, physicians use access to public data bases for medications, images, immunizations & lab results**
- ✓ **Business continuity services: Access to: Patient allergies, Problem & Dx, medications, recent lab results**
- Other criteria is unchanged

HIMSS Analytics®

Stage 5 – Physician Documentation

Current Requirements

- PACS – Radiology, Cardiology and storage of patient DICOM images

Updated Requirements

- ✓ **Physician Documentation creating discrete data or derived via NLP for alerts, clinical guidance and to serve analytical capabilities**
  - ✓ **<u>Or</u> background processes that are watching multiple variables that fire alerts to physicians**
- ✓ **>50% criteria for all wards/ patient days / inpatient cases – use same criteria used for nursing documentation**
- ✓ **Physician Documentation must be live in ED, if any**
- ✓ **Description of intrusion prevention system**
- ✓ **Description of portable device security**

Stage 6 – Verification at POC via Technology

Current Requirements

- Bar code enabled Closed Loop Medication Administration
- Physician documentation with structured templates creating some discrete data to feed a rules & alerts engine

Updated Requirements

- ✓ **Technology is used to order medications**
- ✓ **Technology is used to verify medication orders**
- ✓ **Technology is used to verify medications at the point of administration (medication, strength, route, patient, time)**
- ✓ **Technology is used to verify blood products administration**
- ✓ **Technology is used to verify human milk mother-baby match where there is communal storage of milk**
- ✓ **Technology is used at point of care for specimen collection**
- ✓ **>50% criteria: Use same metric used previously**
- ✓ **ED must also meet these criteria but no % required**
- ✓ **Security risk assessments reported to governing authority**

Stage 7 – CPOE & Meds Management

Current Requirements

- Paper charts no longer used to deliver & manage care
- Mixture of discrete data, medical images, document images available within the EMR
- Data analytics leveraged to analyze patterns of clinical data to improve quality of care, patient safety, and care delivery efficiency
- Clinical data can be readily shared in a standardized, electronic manner as appropriate
- Summary data continuity for all services is demonstrated
- Blood products & human milk included in closed-loop med admin process

Updated Requirements

- ✓ **NON-SCORED: Implementation & use of Anesthesia Information System (five years' notice)**
- ✓ **NON-SCORED: CPOE-enabled infusion pumps (seven to ten years' notice)**
- ✓ **Provide an overview of the Privacy and security program**
- Other criteria unchanged or in earlier stages

HIMSS Analytics®

Logistics

Where Did These Ideas Come From?

Designed initial “strawman” in July ’15 – several iterations since

Focused discussions with international CIOs individually or in groups

- Sessions in US, Canada, Spain, France, UK, Korea, Singapore, Australia, China, Germany, Brazil, etc.
- Stage 6 & 7 & Davies Club in Valencia, Spain
- HIMSS Executive Institute

- **Vendor input sessions to create alignment**
  - Input from major local & international vendors

HIMSS Analytics®

Roll-out Plans

First Announced at HIMSS16 – note: announcing ≠ implementing

- Development of survey questions, definitional text, & scoring mechanisms underway

Implementation timeline

- **1 January 2018**

REMINDER: Revalidation Program started in 2015

- Validation is good for three years
- On-site visit required for revalidation

HIMSS Analytics®

HIMSS Analytics Toolkit

LOGIC™	**Unique Relationships** Built collaboratively with Healthcare Organizations.
CapSite	**Industry Expertise** Lead by former CIOs and vendor executives.
Market Insight	**Deep Data** Proprietary data blended with the best available partner sources and data exhaust.
Advisory Services	**Consultative Insight** More than just theory. Executable insights.

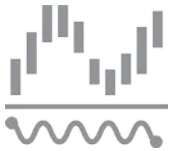
Health IT Actionable Insights

HIMSS Analytics®

We drive the health IT market in the direction it needs to go

EMRAM
EMR Adoption Model

O-EMRAM
Outpatient EMR Adoption Model



AMAM
Analytics Maturity Adoption Model

CCMM
Continuity of Care Maturity Model

DIAM
Digital Imaging Adoption Model

Improved Patient Care and Health IT Insights

HIMSS Analytics®

THANK YOU

John H. Daniels, CNM, FACHE, FHIMSS, CPHIMS

Global Vice President

John.daniels@himssanalytics.org

WEB: http://www.himssanalytics.org

TWITTER: @himssanalytics

LINKEDIN: linkedin.com/company/himssanalytics

HIMSS ANALYTICS
HEALTHCARE ADVISORY SERVICES