HIMSS EMRAM
Let’s speak about digital maturity

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HIMSS in a nutshell

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HIMSS is a global advisor and thought leader supporting the transformation of the health ecosystem through information and technology.

As a mission-driven non-profit, HIMSS offers a unique depth and breadth of expertise in health innovation, public policy, workforce development, research and analytics to advise global leaders, stakeholders and influencers on best practices in health information and technology.

With more than 350 employees, HIMSS has operations in:

North America | Asia Pacific | Europe | Latin America | Middle East | United Kingdom

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Vision

To realize the full health potential of every human, everywhere.

Mission

Reform the global health ecosystem through the power of information and technology.

Transforming health — that's our “why,” and technology is the “how.” We know that the health ecosystem can be extraordinary, and that new perspectives and solutions are the key to real change. From public policy to digital health transformation, that’s what drives us and our members.

Our global worldwide community is 125,000+ strong, and includes everyone from nurses to AI researchers. We bring insights from the world’s top health systems, including 430+ provider organizations, 500+ nonprofit partners and 550+ health services organizations.

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Making health human

At HIMSS, we're committed to **reforming the global health ecosystem through the power of information and technology.**

By connecting people across the health ecosystem, we create a community where collaboration and innovation thrive.

Maturity models at a glance

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900 Millions

World patient population impacted by healthcare institutions using the standards of HIMSS maturity models

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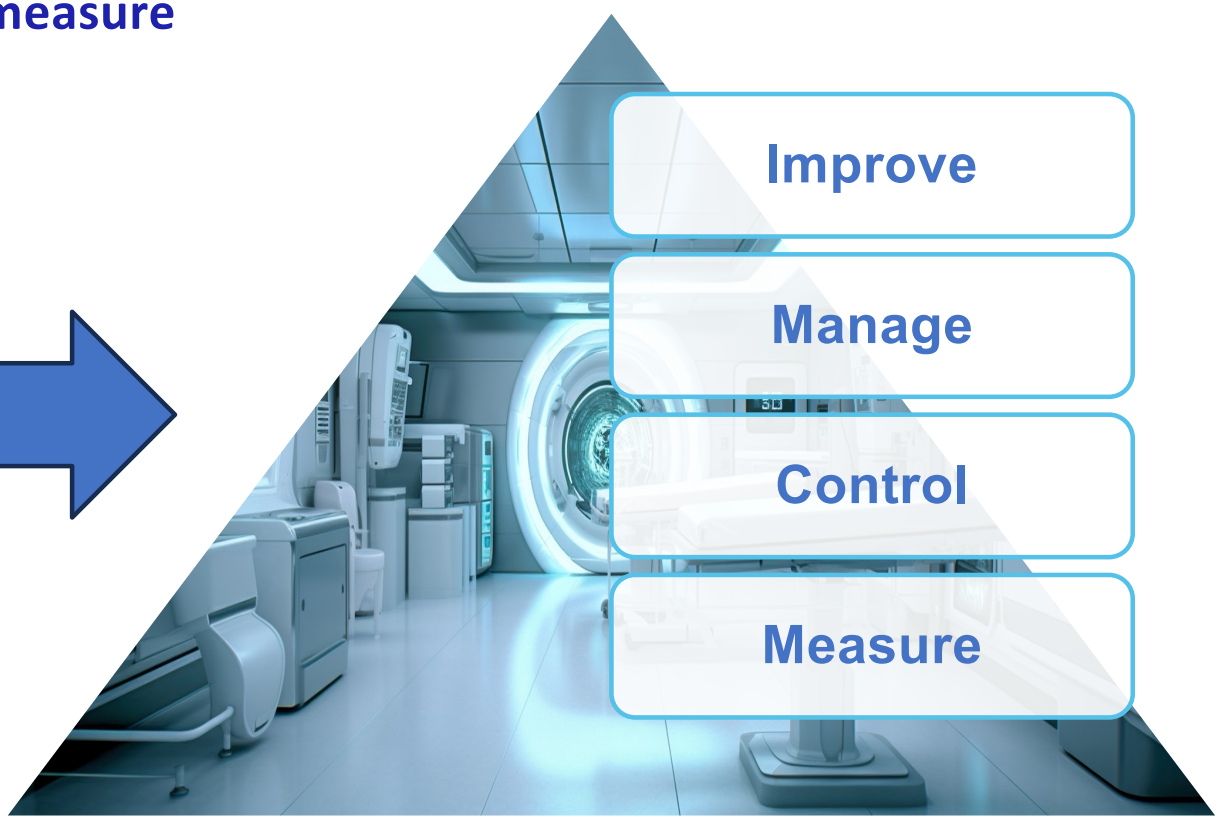
You can only improve what you measure



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According to Peter Drucker, and/or James Harrington, and/or Robert Kaplan, and/or other Management gurus...

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HIMSS Analytics maturity models

- are ambitious and driving the market
- provide a roadmap
- Provide a vision of the desired target
- encourage everyone to work collectively
- support learning from the experiences of others
- enable global benchmarking
- are vendor-agnostic

Key features

- Healthcare-specific
- Capability-based
- Prescriptive, clear and informative
- Compliance requirements stated simply
- Industry standard terminology and detailed references

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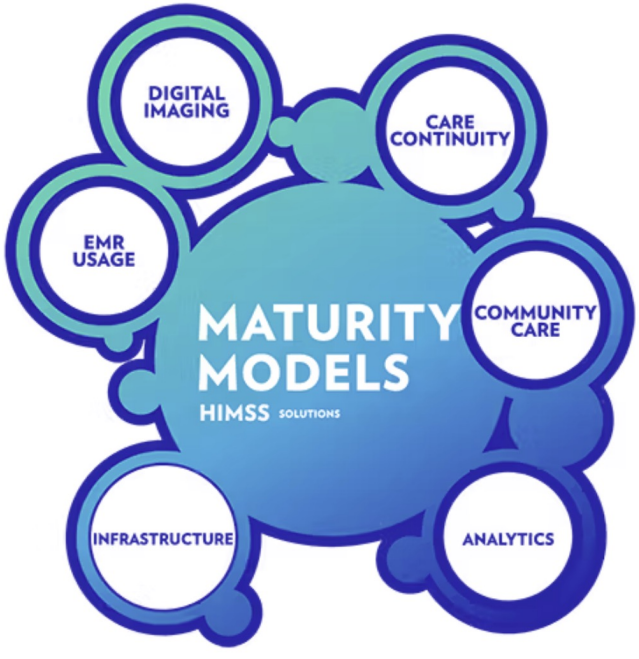

EMRAM
HIMSS SOLUTION

Electronic Medical Records (EMRAM)

Our Electronic Medical Record Adoption Model (EMRAM) helps you assess how you're adopting and using EMRs to support patients and clinicians.

AMAM
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Analytics (AMAM)

Our Analytics Maturity Assessment Model (AMAM) measures your analytics and data governance, helps you deliver real-time insights to providers, and guides you towards AI adoption.

INFRAM
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Infrastructure (INFRAM)

Our Infrastructure Adoption Model (INFRAM) helps you improve your tech infrastructure, so you can reach your goals while meeting international benchmarks and standards.

C-COMM
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Community Care Outcomes (COMM)

The Community Care Outcomes Maturity Model (C-COMM) assesses digital maturity across community care — that's vital because most treatments are non-acute.

DIAM
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Digital Imaging (DIAM)

Our Digital Imaging Adoption Model (DIAM) helps you evaluate and fine-tune all your digital imaging processes.

CCMM
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Continuity of Care (CCMM)

The Continuity of Care Maturity Model (CCMM) helps you assess how you're coordinating patient care across multiple sites, providers and care settings.

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Focus on EMRAM

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Why participate in an EMRAM assessment then a certification ?

Understand and define

- What is an EMR ?
- What are the relevant system components, workflow and governance issues, etc.?

Measure

- Gather information about your abilities
- Use a systematic and standardized approach
- Engage internal stakeholders to verify and validate

Learn

- What is your current state? (level and achievement)?
- Identify information and technology gaps
- Compare yourself with others and share best practices

Improve

- Agree on necessary improvements (in decision-making forums)
- Develop a strategy
- Implement improvements and improve patient safety, quality, and efficiency

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EMRAM (Electronic Medical Record Adoption Model)

EMRAM is an eight stage (0-7) model that measures clinical outcomes, patient engagement and clinician use of EMR technology for acute care hospitals and their affiliated ambulatory care settings, aiming to strengthen organizational performance and health outcomes across patient populations.

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Excellence

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; Full CDS
5	Physician documentation using structured templates; Intrusion/Device Protection
4	CPOE with CDS; 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 - Laboratory, Pharmacy, and Radiology/Cardiology information systems; PACS; Digital non-DICOM image management
0	All three ancillaries not installed

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Stage 0 - Department systems not installed (laboratory, pharmacy, and radiology)
The absence of department-specific systems can hinder the seamless integration of clinical workflows and data management.

Stage 1 - Ancillary systems installed
Establish the foundation for an electronic medical record and accessible health information tailored to the individual patient.

Stage 2 - Clinical data repositories
Create centralized databases that store vast amounts of patient information, facilitating improved healthcare delivery and research.

Stage 3 - Electronic documentation and enhanced security
Patient data is captured electronically in a standardized format and used by appropriate providers for diagnosis and treatment leveraging basic clinical decision support.

Stage 4 - Governance and electronic orders
Strengthen governance and electronic records standardization to enhance efficiency and reduce operational costs.

Stage 5 - Data integration
Effective data integration ensures patient information is seamlessly shared across platforms, supporting remote consultations and continuous care.

Stage 6 - Advanced data exchange
Leverage health tech for advanced data exchange and interoperability for improved patient engagement, clinical efficiency, and departmental insights.

Stage 7 - Dynamic health record
Utilize dynamic tools to foster an engaging healthcare environment that leverages analytics insights for strategic health management initiatives.

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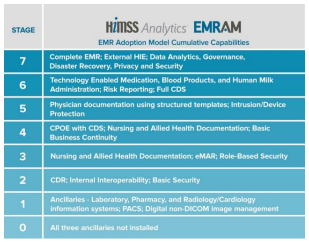

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Stage 3 - Electronic documentation and enhanced security

Patient data is captured electronically in a standardized format and used by appropriate providers for diagnosis and treatment leveraging basic clinical decision support.
50 percent of nursing/allied health professional documentation (e.g., vital signs, flowsheets, nursing notes, nursing tasks, care plans) is implemented and integrated with the CDR (hospital defines formula). Capability must be in use in the ED, but ED is excluded from 50% rule. The Electronic Medication Administration Record application (eMAR) is implemented. Role-based access control (RBAC) is implemented

Stage 2 - Clinical data repositories

Major ancillary clinical systems are enabled with internal interoperability feeding data to a single clinical data repository (CDR) or fully integrated data stores that provide seamless clinician access from a single user interface for reviewing all orders, results, and radiology and cardiology images. The CDR/ data stores contain a controlled medical vocabulary and order verification is supported by a clinical decision support (CDS) rules engine for rudimentary conflict checking. Information from document imaging systems may be linked to the CDR at this stage. Basic security policies and capabilities
addressing physical access, acceptable use, mobile security, encryption, antivirus/anti-malware, and data destruction

Stage 1 - Ancillary systems installed

Establish the foundation for an electronic medical record and accessible health information tailored to the individual patient.
All three major ancillary clinical systems are installed (i.e., pharmacy, laboratory, and radiology). A full complement of radiology and cardiology PACS systems provides medical images to physicians via an intranet and displaces all film-based images. Patient-centric storage of non-DICOM images is also available

Stage 0 - Department systems not installed (laboratory, pharmacy, and radiology)

The absence of department-specific systems can hinder the seamless integration of clinical workflows and data management.

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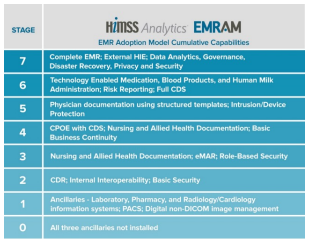

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Stage 5 - Data integration

Effective data integration ensures patient information is seamlessly shared across platforms, supporting remote consultations and continuous care.

Full physician documentation (e.g., progress notes, consult notes, discharge summaries, problem/diagnosis list, etc.) with structured templates and discrete data is implemented for at least 50 percent of the hospital.

Capability must be in use in the ED, but ED is excluded from 50% rule. Hospital can track and report on the timeliness of nurse order/task completion. Intrusion prevention system is in use to not only detect possible intrusions, but also prevent intrusions. Hospital-owned portable devices are recognized and properly authorized to operate on the network, and can be wiped remotely if lost or stolen

Stage 4 - Governance and electronic orders

Strengthen governance and electronic records standardization to enhance efficiency and reduce operational costs.

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.

CPOE is in use in the Emergency Department, but not counted in the 50% rule. Nursing/allied health professional documentation has reached 90% (excluding the ED). 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. Network intrusion detection system in place to detect possible network intrusions. Nurses are supported by a second level of CDS capabilities related to evidence-based medicine protocols (e.g., risk assessment scores trigger recommended nursing tasks)

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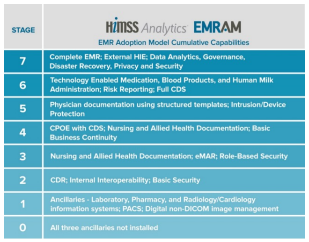

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Stage 7 - Dynamic health record

Utilize dynamic tools to foster an engaging healthcare environment that leverages analytics insights for strategic health management initiatives.

The hospital no longer uses paper charts to deliver and manage patient care and has a mixture of discrete data, document images, and medical images within its EMR environment. Data warehousing is being used to analyze patterns of clinical data to improve quality of care, patient safety, and care delivery efficiency.

Clinical information can be readily shared via standardized electronic transactions (i.e., CCD) with all entities that are authorized to treat the patient, or a health information exchange (i.e.,other non-associated hospitals, outpatient clinics, sub-acute environments, employers, payers and patients in a data sharing environment).

The hospital demonstrates summary data continuity for all hospital services (e.g., inpatient, outpatient, ED, and with any owned or managed outpatient clinics). Physician documentation and CPOE has reached 90% (excluding the ED), and the closed-loop processes have reached 95% (excluding the ED)

Stage 6 - Advanced data exchange

Leverage health tech for advanced data exchange and interoperability for improved patient engagement, clinical efficiency, and departmental insights.

Technology is used to achieve a closed-loop process for administering medications, blood products, and human milk, and for blood specimen collection and tracking. These closed-loop processes are fully implemented in 50 percent of the hospital. Capability must be in use in the ED, but ED is excluded from 50% rule. The eMAR and technology in use are implemented and integrated with CPOE, pharmacy, and laboratory systems to maximize safe point-of-care processes and results. A more advanced level of CDS provides for the “five rights” of medication administration and other ‚rights‘ for blood product, and human milk administrations and blood specimen processing. At least one example of a more advanced level of CDS provides guidance triggered by physician documentation related to protocols and outcomes in the form of variance and compliance alerts (e.g., VTE risk assessment triggers the appropriate VTE protocol recommendation). Mobile/portable device security policy and practices are applied to user-owned devices.

Hospital conducts annual security risk assessments and report is provided to a governing authority for action

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Benefits of EMRAM for Institutions

- Continuity of care
- Comparison (over time, between regions and countries)
- Availability, reputation, acceptance
- Identification of good practices
- Independence and objectivity
- Strategy Decision Support
- ROI (Stage 6 and 7)
- Stakeholder engagement and common language between IT and DG
- Attractiveness

A unique proposal:

- Applicable globally / used by healthcare organizations across the globe.
- Developed with the support of end-users (CIOs, doctors, nurses, AI searchers, etc.) and industry.

- **Will help you develop your image and your attractiveness for both professionals and patients.**

EMRAM and « La feuille de route du numérique en santé 2023-2027 »

The French stream

MaturiN-H

Référentiel de maturité numérique des établissements hospitaliers

French Digital Maturity Repository

Mapping

EMRAM v 2018

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France developped its own maturity model and mapped it with EMRAM

So, any hospital could be able to pass an EMRAM assessment.

To date, MATHURIN-H has only been implemented in its medico-social component, the launch of the Hospitals reference framework by the DGOS is still awaited.

MATHURIN-H foreshadows French reflections on a European super maturity repository.

Conclusion

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Constantly seeking excellence by improving digital maturity is mandatory.

It must be clearly understood that digital transformation, especially when integrating AI, is a pharmaceutical object, that can be remedy, or poison.

Together, using EMRAM, we can create a healthier world for all, all over the planet.

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Thank you

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