Global Trends in Healthcare: A Focus on Interoperability

Hal Wolf
President & CEO
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
Global HIMSS

Analytics

Events

Media

Health 2.0

HIMSS Overview
Our Philosophy

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

Mission
Reform the global health ecosystem through the power of information and technology.
How is HIMSS leading change?

Five Key Strategies

1. **Membership Value**
   Enhance the value delivered to HIMSS members

2. **Thought Leadership**
   Advance the ecosystem through leadership

3. **Maturity Model Reach**
   Develop the breadth and reach of HIMSS adoption models (beyond EMRAM)

4. **Innovation**
   Expand opportunities for engagement through new innovation-centric offerings

5. **Expand Internationally**
   Expand our international footprint to become the global leader in health innovation
World patient population impacted by healthcare institutions using the standards of HIMSS maturity models:

796,000,000
EMRAM Stage 6 & 7: Potential Patient Impact

Nearly 67,000 institutions have engaged in maturity model assessments in 50 countries worldwide. There are 2,739 institutions that have been validated at Stage 6 or 7 on the EMRAM alone. These elite healthcare institutions have the potential to impact the care of over 530,000,000 people worldwide based on the populations in which they serve.

### Maturity Model Assessment Coverage Worldwide

### Potential Patient Impact for Stage 6 & 7 EMRAM Hospitals

- Asia Pacific: 272M
- Europe: 68M
- Latin America: 36M
- Middle East: 42M
- U.S. & Canada: 106M
EMRAM Stage 6 / 7 Awards - Europe

Austria 1
Belgium 2
Denmark 1
Germany 2
Ireland 1
Italy 6
Netherlands 4
Norway 1
Portugal 3
Russia 1
Slovenia 1
Spain 7
Switzerland 1
Turkey 164
United Kingdom 3

TOTAL: 198

(data from January 31st, 2019)
EMRAM Stage 6 & 7: Potential Patient Impact

Even with the extensive reach of the maturity models, there is still a long way to go. Institutions reaching the highest stages on the EMRAM are still only likely to reach segments of the population in the regions they are located.

Regional Population Served by EMRAM Stage 6 & 7 Facilities

<table>
<thead>
<tr>
<th>Region</th>
<th>Population Served</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia Pacific</td>
<td>9.3%</td>
</tr>
<tr>
<td>Latin America</td>
<td>11.5%</td>
</tr>
<tr>
<td>Europe</td>
<td>12.3%</td>
</tr>
<tr>
<td>Middle East</td>
<td>29.5%</td>
</tr>
<tr>
<td>U.S. &amp; Canada</td>
<td>31.5%</td>
</tr>
</tbody>
</table>
Maturity and Adoption Models: HIMSS Analytics

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

**Analytics Maturity Adoption Model (AMAM)**
**Continuity of Care Maturity Model (CCMM)**
**Clinically Integrated Supply Outcomes Model (CISOM)**
**Digital Imaging Adoption Model (DIAM)**
**EMR Adoption Model (EMRAM)**
**Infrastructure Adoption Model (INFRAM)**

MORE TO COME!

**Improved Patient Care and Health IT Insights**

- **56,900** O-EMRAM Outpatient Institutions Scored
- **7,127** In 19 Countries EMRAM/O-EMRAM Stage 7 Institutions
- **10,100** In 50 Countries EMRAM Institutions Scored
- **~14,200** In 40 Countries EMRAM/O-EMRAM Stage 6 Institutions

In 50 Countries

In 40 Countries
Question:
What is a key component in the effort to advance healthcare for the future?
Global Challenges in Most Systems

- Fastest Ageing Population
- High Chronic Disease Burden
- Geographic Displacement
- Extremely Challenging Funding System
- Highly Educated and Demanding Consumer
- Lack of Actionable Information
- Growing Staff Shortages
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After years of collecting information, the industry was sitting on massive amounts of clinical data. The question began with “How to get that information into structured data?”
System Needs Driving Interoperability

- Multi-pronged approach to exchange
- Limited measurement of standards implementation, adoption and use
- Provider centric system of exchange
- Semantic interoperability a barrier to data exchange
- Inconsistent quality lowers value proposition
- No common agreement on patient matching
Four Levels of Interoperability

- **Foundational (Level 1)** – inter-connectivity one system or application to another.
- **Structural (Level 2)** – organization of data exchange
- **Semantic (Level 3)** – data elements with standardized definitions
- **“New” Organizational (Level 4)** – Governance enables shared consent, trust and integrated end-user processes and workflows.
Technological Trends Push Interoperability

Technological advances are creating new opportunities:

- Wireless
- Processing power
- Cloud
- Blockchain
- Artificial Intelligence
- FHIR®
BENEFITS FROM USING AI IN HEALTHCARE: BY TYPE OF ORGANIZATION

In your opinion, which are the biggest benefits from using AI in healthcare?

Report: AI Use in European Healthcare; HIMSS Analytics eHealth Trendbarometer; May 2018
Developing an International Consortium
Convening Stakeholders and Efforts

**Stakeholder organizations:**
- National government agencies
- Provider health systems
- Leading technology market suppliers
- Medical device manufacturers
- Standards and profiling organizations

- Support the implementation of safe, usable, and effective health data standards on a global scale
- Accelerate the development and adoption of secure and open, standards-based APIs in healthcare
- Define an on-ramp for exchange via APIs
- Facilitate the establishment of implementation communities around the world
Want More Information to Help Guide Your Interoperability Efforts?

www.himss.org/library/interoperability-health-information-exchange
Thank you!

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