

A full-page background image of the Dubai skyline at sunset. The Burj Khalifa is the central focus, reaching towards the top of the frame. The sky is a mix of blue and orange, with soft clouds. Other skyscrapers are visible in the background and foreground, reflecting in a body of water at the bottom.

PERSPECTIVE

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MASTERING LARGE-SCALE DIGITAL MATURITY

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DIGITAL MATURITY INITIATIVE

This publication summarizes the expert contributions from the Digital Maturity Workshop at the 6th GCC eHealth Development Conference in Dubai organized by the GCC Taskforce on Workforce Development in Digital Healthcare (ZIMAM) and MWAN Events. Lemonmint - Digital Hospital Initiatives proudly served as a partner and co-host of the workshop.



International Digital Health
Workforce Development
Collaborative

Zimam
Developing Careers
in Digital Health



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THE CENTRICITY OF WORKFORCE DEVELOPMENT

The mantra "grow or die" resonates powerfully in the healthcare sector, underscored by fierce competition, escalating healthcare costs, tightening regulatory burdens, and the rising issue of clinician burnout. In this environment, achieving excellence in digital transformation is not just aspirational but essential.

Healthcare system leaders have learned, often through difficult experiences, that technology investments must be underpinned by a clear strategy, a robust benefit management approach, and, critically, empowered technical and clinical resources. The absence of these elements has been a root cause of many high-profile failures in digital health implementations.

Digital maturity models are instrumental in guiding leadership to craft effective strategies. The models assist in setting priorities and provide a framework for implementing a benefit management process that can demonstrate longterm ROI. Importantly, they connect operational digital health interventions, like implementing Clinical Decision Support or closed-loop medication, with key objectives like ensuring patient safety and enhancing patient experience.

"Maturity models often fall short in evaluating the impact of empowered teams of clinicians and IT staff."





FOREWORD

Maturity models must evaluate impact of empowered workforce

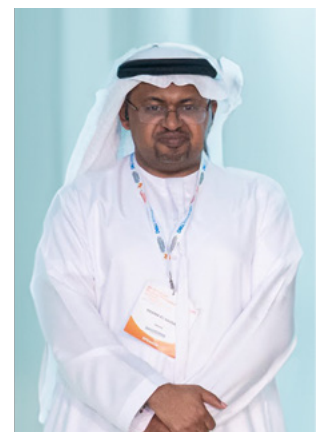
However, a significant gap persists in most of these maturity models: they often fall short in addressing or evaluating the impact of empowered, multidisciplinary teams of clinicians and IT staff. This oversight can hinder the sustainability and scalability of digital interventions. To address this, the International Digital Health Workforce Development Collaborative (ZIMAM) was recently established.

“The success of digital health transformation hinges not just on technology but equally on the people who implement and sustain it.”

ZIMAM’s mission is to forward a competency-based framework for digital health workforce development. This framework aims to measure the maturity of the digital health workforce and empower members of multidisciplinary teams essential for blending technology with various domain expertise to deliver digitally-enabled solutions.

ZIMAM’s competency-based approach, which integrates micro-credentialing, career-pathing, and mentorship, supports the development of a robust digital health workforce. This initiative represents a significant step in acknowledging and enhancing the role of human resources in the success of digital health initiatives.

In conclusion, as healthcare systems strive for digital excellence, the centrality of workforce development cannot be overstated. The success of digital health transformation hinges not just on technology but equally on the people who implement and sustain it. ●



Dr. Osama Elhassan is the Vice President of UAE Health Informatics Society and Co-founder and Chair of the GCC Taskforce on Workforce Development in Digital Healthcare (ZIMAM).



EVIDENCE TO TRUST

Digital Maturity provides the data to build trust into healthcare transformation strategies and initiatives.

What exactly do we mean when we discuss digital maturity in healthcare? In essence, it's about strategic frameworks that serve as roadmaps, guiding the implementation of digital solutions in various healthcare contexts.

These frameworks incorporate a range of elements: technology standards, best practices, scientific evidence, industry frameworks, and regulatory requirements. Their objective, regardless of whether they're applied at departmental, enterprise, or regional levels, is to bolster outcomes like quality of care, financial performance, and patient satisfaction.

Digital maturity assessments are crucial tools.

The assessments measure an organization's advancement in embedding maturity concepts, or models, into their operational fabric.

Understanding digital maturity is more than academic; it's practical and impactful. It gives health providers and governments the data and insights needed to make informed decisions regarding policies, investments or business strategies. Measuring and evaluating the progress in digital maturity helps build trust in health systems, thus ensuring that digital transformation benefits both healthcare professionals and patients.

I had the privilege of chairing the Digital Maturity Workshop at the 6th GCC eHealth Workforce Development Conference in Dubai. This event was a landmark gathering of regional and international experts, who discussed large-scale assessments of digital maturity at enterprise and national level and their impact on managing health policy and business decisions.

This edition of Perspective offers a condensed overview of the workshop's discussions and distills the key recommendations put forth by the experts. It provides readers with a comprehensive view on large-scale digital maturity projects globally and their strategies, impact and learnings.

Enjoy reading!



Armin Scheuer
Founder & CEO
Lemonmint - Digital
Hospital Initiatives



LEAVING NO ONE BEHIND



The Global Digital Health Monitor led by the World Health Organization (WHO) aids governments in laying a strong foundation for digital transformation, thus avoiding a „patchwork approach,“ according to **Prof. Dr. Alain Labrique**.

The Global Digital Health Monitor, a cornerstone of WHO's digital health strategy, represents a significant leap in understanding and guiding the digital health landscape. Encompassing data from over 100 countries, the Monitor serves as a comprehensive tool for assessing and benchmarking digital health initiatives. Its primary function is to evaluate foundational components of digital health systems, including workforce leadership, standards, investment, infrastructure, legislation, and applications.

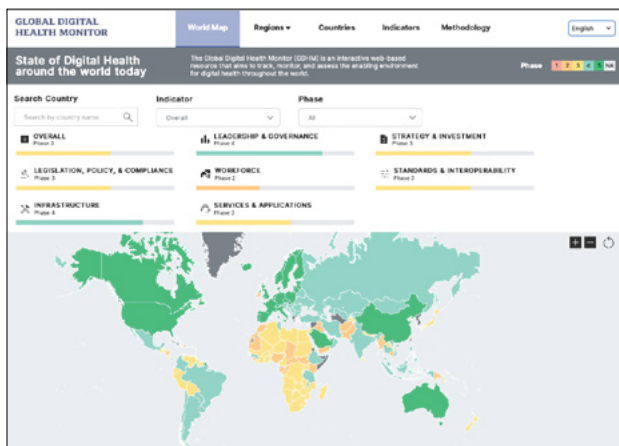
A global shift towards more mature, comprehensive digital health

At its core, the Monitor uses a maturity model based on seven pillars. This model allows countries to perform self-assessments against standardized indicators, fostering a consistent and comparable understanding of digital health progress. Through a web portal, countries can track their growth over time, generate detailed report cards comparing their progress against global and regional averages, and identify areas needing improvement.

With the Monitor, the WHO aims to move countries beyond a fragmented approach to digital health. The tool's data, provided largely by the countries themselves, offers an honest reflection of global digital health status. Presently, no country is in the initial phase of digital health maturity, with most residing in phase three and some advancing to phase five.

“The mentality a decade ago was to use digital health to patch potholes as opposed to taking a more systematic, holistic approach to strengthening the health system.”

The Monitor's impact extends beyond its assessment capabilities. It also influences policy and investment decisions. Development banks like the World Bank have utilized its data to understand the digital health landscapes of low and high-income countries, tailoring their strategies and investments accordingly.



“No country is in phase one anymore; the median is phase three. But we still have work to do as a global community to move the needle towards advanced maturity.”

Enhancing Global Health Equity through Digital Transformation

Consequently, Prof. Labrique concludes that the goal of digital health is to ensure no one is left behind. Hence, the Global Digital Health Monitor transcends its role as an assessment tool, emerging as a key facilitator in the global pursuit of health equity and universal healthcare; it is crucial in ensuring that the advancements in digital health technology are accessible and beneficial to all. ●



KNOW YOUR EXPERT

Prof. Dr. Alain Labrique, an infectious disease epidemiologist, specializes in utilizing digital innovations to address public health challenges. He currently holds the position of Director for the Department of Digital Health and Innovation at WHO in Geneva, Switzerland.

The Global Digital Health Monitor offers an in-depth analysis of digital health maturity across different regions, it enables countries to identify specific areas needing improvement and alignment with global standards.

www.digitalhealthmonitor.org

THINK. ACT. HEALTH.

1. Update and Share Digital Health Information:

Engage with WHO to update your country's data in the Global Digital Health Monitor, ensuring it accurately reflects your current digital health maturity. Additionally, contribute to WHO's global repository by submitting your latest digital health strategies and policies.

2. Invest in Digital Health Foundations:

Advocate for and invest in the essential building blocks of digital health ecosystems, such as robust infrastructure, clear policies, and standardized practices.

3. Strategic Planning and Skill Development:

Develop comprehensive, costed roadmaps and enterprise architectures; prioritize the development of digital health workforce skills through focused training and education programs.

4. Promote Health Equity in Digital Transformation:

Design and implement digital health systems with an intentional focus on promoting health equity. Establish national policies and guidelines that ensure these systems are inclusive and accessible to all.



MAXIMIZING EFFICIENCY



In a comprehensive scientific study presented by **Dr. Abdullah M. Alsabah** the efficiency of hospitals was rigorously analyzed, revealing significant findings about the optimal functioning of healthcare facilities.

The study was anchored on two types of efficiency: scale efficiency, determining the optimum size of a hospital for effective outcome production, and pure technical or managerial efficiency, focusing on resource management. The overall efficiency was calculated as the product of these two.

The study faced limitations due to unavailable data on hospital stocking capital. As a workaround, proxies like the number of beds and manpower were used for inputs, while intermediate outputs were assessed through outpatient visits and admissions.

According to the study:

- Only 20% of the hospitals achieved complete efficiency during the study period.
- The mean technical efficiency score across hospitals was 80%, showing a positive trend from 2010 to 2014.

- Material efficiency stood at 86%, with a 2% improvement over the study period
- Scale efficiency reached 92%.

There is an overabundance of resources such as beds and nurses that can be allocated more effectively.

Determinants of Efficiency

Further analysis revealed excess resources in the hospitals, including 9% more beds, 13% more doctors, 9% more nurses, and 8% more non-medical staff than needed of optimum efficiency. Conversely, there was a shortfall in outputs, with a 9% deficiency in Patient-Physician encounter visits and a 0.3% in overall efficiency.



The study identified several key factors influencing hospital efficiency:

- The average length of stay was inversely related to technical efficiency.
- Larger hospitals (over 400 beds) showed more technical deficiencies.
- A subsequent analysis (2015-2019) found that the mean technical efficiency decreased to 75%, managerial efficiency was 85%, and scale efficiency was 89%.
- Institutional factors, including bed occupancy rate, level of specialization, and the number of beds, significantly impacted efficiency.

Dr. Alsabah emphasized the need for broader regional studies to evaluate the efficiency of both public and private health systems. He advocated for the adoption of electronic medical records (EMRs) to enhance care quality and operational performance.

Such studies, he noted, are critical for benchmarking and improving health system performance, particularly in regions undergoing major health transformations. ●



KNOW YOUR EXPERT

Dr. Abdullah M. Alsabah
is the Undersecretary of the
Ministry of Defence, Kuwait.



THINK. ACT. HEALTH.

1. Undertake a Comprehensive Study

Carry out a broad study evaluating the efficiency of both public and private hospitals across the GCC region.

2. Assess Public Health System Efficiency

Evaluate the efficiency of the public health system to integrate and enhance health performance data.

3. Implement DEA Models

Promote the use of Data Envelopment Analysis (DEA) models to boost operational performance in healthcare settings.

4. Focus on Benchmarking and Infrastructure

Invest in healthcare infrastructure and information systems to support benchmarking and continuous improvement in population health.

5. Adopt Electronic Medical Records (EMR)

Implement EMR systems to enhance the quality of patient care and healthcare service delivery.



COOPERATE GLOBALLY

Hosted by digital health advisor Philippe Gerwill, experts from **AHIMA, CHIME and HIMSS** converged to explore the intricate puzzle of healthcare ecosystem maturity. The panel, titled “International Collaboration to Solve the Healthcare Ecosystem Maturity Puzzle” illustrated the importance of measuring digital impact, training healthcare professionals, and leveraging digital maturity scores to enhance healthcare delivery globally.

AHIMA

Emphasizing Proficiency in Health Information Management.

Mat Spurgeon from AHIMA underscores the criticality of skillful handling of health information. AHIMA's primary focus is on equipping health-care practitioners with the necessary skills to effectively use, manage, safeguard, and deploy health information. This is achieved through various training programs and certifications that adhere to global standards and competencies vital for healthcare systems. By conducting health information assessments, AHIMA assists organizations in bridging the gap between the leadership and technical aspects of health information systems, advocating for the proper structuring and utilization of these systems. This approach

is central to extracting valuable insights from digital health data, thereby translating them into clinical and operational improvements. AHIMA's commitment lies in localizing best practices to ensure health information remains accurate, accessible, protected, and complete, aligning with its mission to transform healthcare through trusted information.

KNOW YOUR EXPERT

Matt Spurgeon is Vice President, Strategy and Development at AHIMA.





CHIME

Rethinking Healthcare as Inherently Digital.

In the realm of healthcare, recognizing the intrinsic role of digital technology is essential. Jane Dwelly from CHIME highlights the importance of their Digital Health Most Wired survey as a comprehensive benchmark for digital maturity in hospitals globally. This tool offers healthcare organizations an opportunity to evaluate their cybersecurity maturity and overall digital literacy. Dwelly notes a significant correlation between organizations that routinely assess their digital maturity and their ability to attract and retain top talent, especially during workforce shortages.

This trend underscores the growing need to view healthcare through a digital lens. The Digital Health Most Wired survey not only reflects the advancements of healthcare providers in the digital age but also signifies a critical shift in healthcare's approach: embracing health as inherently digital. Such a perspective is vital for enhancing patient care quality and fostering innovation in healthcare delivery. ●



KNOW YOUR EXPERT

Jane Dwelly is Vice President International at CHIME.

HIMSS

Addressing Global Digital Maturity

John Rayner from HIMSS tackles the challenge of creating a globally applicable digital maturity model for healthcare. The main hurdle was ensuring the model's effectiveness in diverse international settings. Today, HIMSS extends the use of digital maturity assessments beyond mere measurement. Health providers can strategically incorporate these assessments into procurement, specification, and deployment processes. This approach also involves using the model in contracts to guide suppliers toward specified digital maturity levels.

To ensure global relevance, HIMSS aligns with international standards and regulations. Their method involves consulting with academic centers, CIOs, and CMIOs worldwide to integrate international best practices. Despite being vendor-agnostic, HIMSS keeps abreast of industry trends to ensure their model accommodates a wide range of healthcare environments and meets international healthcare needs effectively. ●



KNOW YOUR EXPERT

John Rayner is Digital Health Strategist EMEA at HIMSS.



MEASURING IMPACT, SHAPING POLICY



Professor Volker E. Amelung established a crucial link between value-based healthcare and digital maturity models. He delved into the core concept of value-based care, which is encapsulated in the formula: value equals outcomes divided by cost. This approach, he argued, is the “business case for quality in healthcare.”

The Core Elements of Value-Based Healthcare

Value-based healthcare is grounded in six key elements, according to Amelung:

- 1. Integrated Practice Units:** Focused healthcare delivery models.
- 2. Outcome Measurement:** Assessing healthcare effectiveness from an individual perspective.
- 3. Bundled Payments:** Encouraging efficiency through financial models.
- 4. Integrated Care:** Fostering collaboration across healthcare disciplines.
- 5. Geographic Reach:** Expand excellent services across community/region.
- 6. Enabled Information Technology Platforms:** Leveraging digital systems for better health-care delivery.

Amelung emphasized the intricacies of measuring outcomes, noting the significant impact of external factors like social determinants of health.

The challenge lies in ensuring that healthcare systems contribute positively to outcomes without succumbing to risk selection biases.

Digital Maturity and Quality Management

Digital maturity models play a pivotal role in enhancing healthcare quality. Amelung highlighted the use of these models in public reporting and health literacy. By making healthcare performance transparent, patients are empowered to make informed decisions. Moreover, these models offer healthcare providers benchmarks to improve services.

Turning to Germany’s Digital Radar model, Amelung described its practical implementation in assessing the digital maturity of German hospitals. This approach started with utilizing existing technologies and adapting them to local



conditions. The model has successfully included over 1,600 hospitals, offering a comprehensive view of the digital landscape in German healthcare.

Impact on Healthcare Providers and Policy

For healthcare providers, the DigitalRadar serves as a tool for self-assessment and benchmarking, guiding strategic decisions and internal communication. It also aids in demonstrating the need for further investment in digitalization to hospital management.

From a policy perspective, models like the Digital-Radar bring transparency to healthcare systems, allowing governments to assess the impact of healthcare reforms effectively. The ultimate goal is to enable patients to make smarter healthcare choices, similar to how one might choose a hotel or restaurant.

Professor Amelung concluded by underscoring the necessity of viewing healthcare systems from an investment perspective, fostering intrinsic motivation among healthcare professionals. The journey towards digital maturity in healthcare is long, but essential steps like the DigitalRadar model pave the way for more patient-centered, outcome-focused healthcare systems. ●



KNOW YOUR EXPERT

Prof. Volker E. Amelung is a leading expert on International Health System Research, the founder and CEO of inav Institute i and the speaker for the DigitalRadar Consortium in Germany.

“Embracing digital health is not just an option; it’s a necessity for the future of patient-centered care.”

THINK. ACT. HEALTH.

1. Integrate Digital Maturity Assessments

Healthcare organizations should routinely assess their digital maturity to identify areas for improvement and guide digital transformation strategies.

2. Focus on Outcome-Based Care

Develop and implement strategies for value-based healthcare that prioritize patient outcomes, taking into account individual patient needs and social determinants of health.

3. Enhance Health Literacy and Transparency

Utilize digital maturity models for public reporting to enhance health literacy, enabling patients to make informed decisions based on transparent and accessible healthcare performance data.

4. Invest in Digital Health Infrastructure

Encourage healthcare providers and policymakers to invest in digital health infrastructure and technologies, recognizing their pivotal role in improving healthcare quality and efficiency.



GERMANY'S NATIONAL ASSESSMENT STRATEGY

Germany's healthcare system is undergoing a transformative journey with the introduction of the DigitalRadar model. Initiated by the Federal Ministry of Health, this project marks a significant step in evaluating and enhancing digital maturity across the nation's healthcare institutions.

The DigitalRadar project was born out of a necessity to assess the impact of substantial government funding allocated for digitizing hospitals. With €4.3 billion from the "Hospital Future Fund," the need to measure and understand the outcomes of this investment became imperative. DigitalRadar's approach integrates scientific research with local requirements, creating a model that resonates with Germany's unique healthcare landscape.

DigitalRadar swiftly gathered data from 1,624 hospitals marking it the largest digital maturity assessment within a short span of three months. Data was collected through online self-assessment with third-party validation by the DigitalRadar team. The model revealed an average digital maturity score of 33.3% across hospitals. While infrastructure scored high, patient participation and telehealth showed room for improvement, especially in smaller healthcare institutions. The project identified key barriers to digitization, including clinical personnel resistance, interoperability challenges, and data protection regulations.

Seven Dimensions Reflect National Policy Focus

The DigitalRadar model evaluates healthcare digitization across seven critical dimensions that reflect the national health policy focus of the German government:

1. Structures and Systems

Evaluating the foundational digital infrastructure of healthcare institutions.

2. Resilience Management & Performance

Assessing the ability to maintain digital operations under various conditions.

3. Organizational Control & Data Management

Examining how data is managed and controlled within organizations.

4. Clinical Processes

Focusing on the integration of digital tools into clinical workflows.

5. Information Exchange

Looking at how information is shared within and between healthcare entities.



6. Telehealth

Assessing the implementation and effectiveness of remote healthcare services.

7. Patient Participation

Evaluating the involvement and engagement of patients in digital health processes.

Integration with Global Standards and the Role of Stakeholders

Integrating 65% of HIMSS EMRAM items and other digital maturity models, DigitalRadar not only served as a national assessment tool but also enabled potential international benchmarking as hospitals received an EMRAM indicator score. Comparisons with healthcare systems in Canada's Ontario region, the US and Australia positioned German hospitals predominantly in the lower stages of EMRAM, yet still solid in the context of international benchmarking.

DigitalRadar exemplifies a comprehensive and methodical approach to understanding and improving digital health capabilities. It aligns with Germany's commitment to advancing healthcare quality and efficiency through digital transformation. By creating a best-of-breed solution together with local stakeholder, the German government overcame resistance against adopting a foreign model, emphasizing the dual achievement of adhering to national priorities while maintaining an awareness of Germany's global standing in healthcare.

DigitalRadar Krankenhaus



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The DigitalRadar consortium consists of 3 members - the research institute inav, the consulting firm Lohfert & Lohfert and HIMSS. The consortium is lead by scientists from Charité University Medicine and from the Sankt Gallen Medical School in Switzerland.



KNOW YOUR EXPERT

Armin Scheuer, initiator of the DigitalRadar consortium, served as its spokesperson during the first national assessment period. He previously held the position of VP & Executive Director EMEA at HIMSS.



LEADING TRANSFORMATION, PIONEERING INNOVATION

The Middle East has consistently been at the forefront as an early adopter of digital maturity concepts. With a deep-seated commitment to innovation, governments and healthcare providers in the region have not only prioritized the assessment and enhancement of their digital infrastructure but have also set benchmarks in implementing digital strategies effectively. Three large-scale projects from UAE, KSA, and Turkey particularly stand out.

Dubai's Committed EMRAM Journey

The UAE's journey towards digital maturity in healthcare commenced in 2011, with a focus on both private and public hospitals. Unlike the tailored models of Germany and Saudi Arabia, the UAE embraced a global standardized model, utilizing HIMSS EMRAM. By leveraging the HIMSS EMRAM, significant enhancements in patient data management and operational efficiency were achieved. Dr. Al-Redha recalled the project's beginnings, inspired by a presentation in Orlando, where the vision to measure and improve Dubai's digital healthcare capabilities first took shape.

A key component of the UAE's digital maturity strategy is workforce training. Recognizing the evolving digital landscape in healthcare, Dr. Al-Redha stressed the need for medical schools globally to update their curriculums. This revision aims to ensure that medical students are well-prepared

to navigate digital healthcare systems effectively after graduation.

Appreciative of the specialized digital maturity models like those in Germany and KSA, Dr. Al-Redha envisions a future where the UAE might develop its localized digital maturity framework, too. Currently however, Dubai's focus is on leveraging established international standards to foster a robust digital healthcare environment. ●

KNOW YOUR EXPERT

Dr. Mohammad Abdulqader Al Redha is the Director of Health Informatics & Smart Health Dept at Dubai Health Authority, UAE





Saudi Arabia's Comprehensive SeMA Project

The Saudi e-Health Maturity Assessment (SeMA) is a key component in establishing foundational digital maturity benchmarks, involving a broad spectrum of healthcare facilities. The SeMA framework, addresses critical aspects such as privacy, security, and patient engagement, categorizes maturity from basic to advanced levels. A key success factor is the establishment of champions within the health-care community to advocate for digital transformation and overcome resistance, ensuring broader acceptance and successful integration of digital maturity measures.

Turkey's Trailblazing National Digital Assessment

Turkey was the pioneer in executing the world's first nationwide digital maturity assessment in 2013. This landmark initiative led to major developments, including the integration of all hospitals into the Ministry of Health's network, significantly improving patient care and safety. Turkey's commitment is further evidenced by over 160 hospitals achieving high EMRAM stages, showcasing its strategic approach to healthcare digitalization.



KNOW YOUR EXPERT

Hanan Alenzi is the Director of the Knowledge Management Department at National Health Information Center, Saudi Health Council, KSA



KNOW YOUR EXPERT

Dr. Gurhan Zincircioglu, MD, MSc, FHIMSS is Ortho-paedic Surgeon and CMIO at Tire State Hospital Izmir, Turkey



KSA'S NATIONAL ASSESSMENT STRATEGY

KSA is taking significant strides towards digital transformation. A tool to support this endeavor is the Saudi e-Health Maturity Assessment (SeMA) - a comprehensive framework designed to assess and enhance the digital maturity of the healthcare sector in KSA. This initiative aligns with the Kingdom's Vision 2030, emphasizing the critical role of technology in revolutionizing healthcare delivery.

SeMA aims to establish a baseline for KSA's healthcare sector's digital maturity and readiness. It supports national-level decision-making in healthcare by enabling comparisons between current statuses and forecasting trends through analytical reports. Additionally, SeMA facilitates the integration of new entities into the Health Information Exchange system. By identifying strategic initiatives and targeted service points, SeMA guides facilities in achieving their goals and addressing pain points.

Framework Development and Assessment Dimensions

The SeMA Framework is targeting four critical healthcare segments: medical cities, hospitals, primary care centers, and specialized/standalone centers. The framework's development is rooted in four pillars:

1. Digital Fitness Assessment Framework

Evaluates an organization's readiness to adopt technologies.

2. International Digital Assessment Benchmarking

Incorporates models like HIMSS EMRAM, Global Digital Health Index, and NHS for a global perspective.

3. KSA Current State

Assesses the current state of healthcare providers and regulators within KSA.

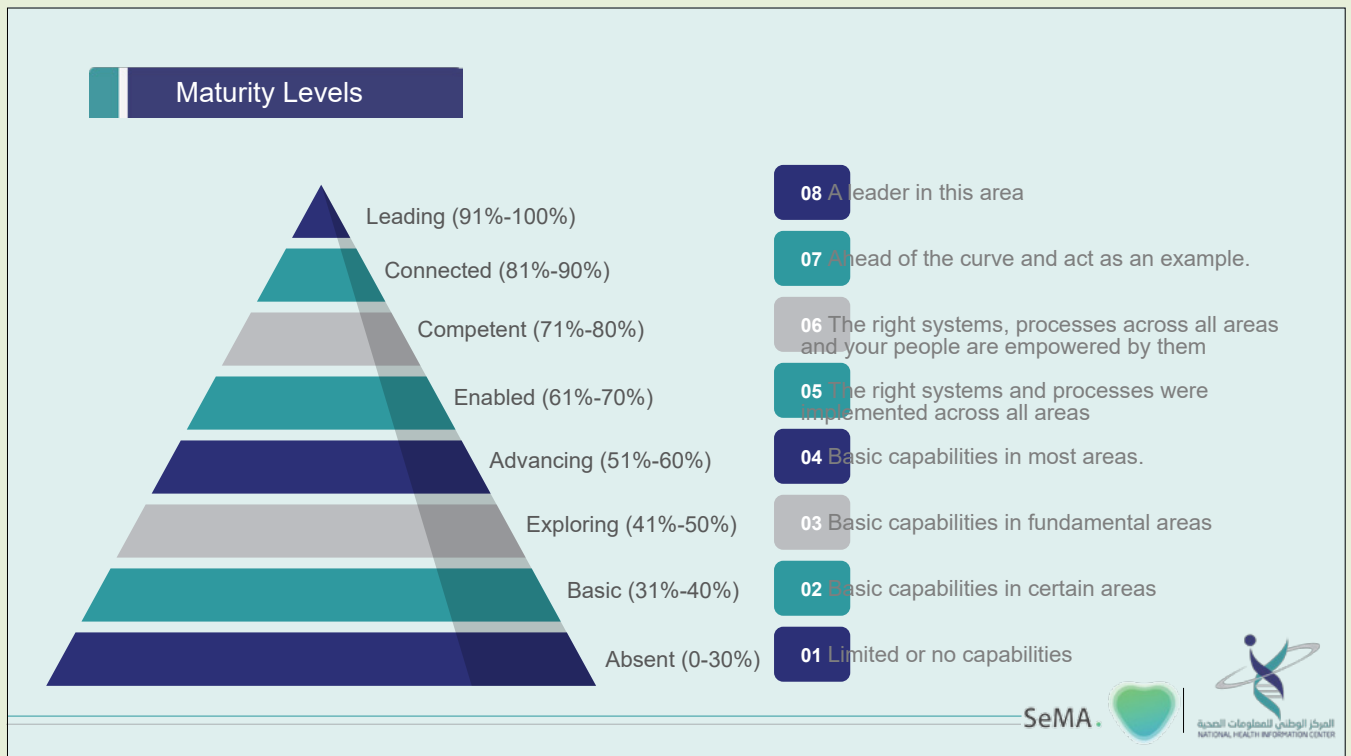
4. Emerging Technologies

Focuses on the top emerging technologies that the NHIC will be adopting in KSA.

SeMA's approach is comprehensive, involving eight core dimensions: strategy, alignment with national strategies, leadership alignment, financial efficiency, governance bodies, organizational structure, partnerships, and emerging technologies (including AI, blockchain, and digital building management systems).



BACKGROUND



Eight maturity levels support healthcare providers in identifying key initiatives and areas of development.

Scoring Criteria and Weightings

The scoring criteria are weighted across various dimensions, with a significant emphasis on Applications & Infrastructure (40%) and Organization & Workforce Competencies (20%). Other dimensions like Strategy & Governance, Patient Experience & Population Health, Privacy & Security, Interoperability & Integration, Data & Analytics, and Emerging Technology are also integral to the assessment.

The assessment begins with an orientation about the model, followed by a mock assessment, registration in the SeMA Portal, and the actual assessment. The process includes online validation of documents, an opportunity for scoring and appealing, onsite validation when needed, and a certification and renewal process to be repeated every three years.



KNOW YOUR EXPERT

Hanan Alenzi is the Director of the Knowledge Management Department at National Health Information Center, Saudi Health Council, KSA. She has spearheaded the establishment of the first National Digital Health Maturity & Readiness Assessment for the Health-care Sector in Saudi Arabia.



PARTNERSHIPS FOR EXCELLENCE

The integration of advanced technology solutions is crucial for achieving digital maturity in healthcare. A common understanding of digital maturity models like those from CHIME and HIMSS can be beneficial to both - technology providers and healthcare institutions.

Command Center: Data-driven Decision-making

Manuel Pérez Vallina from Madrid University Hospital has spearheaded the implementation of a command center, taking guidance from CHIME's digital maturity model, Digital Health Most Wired. This initiative marks a significant transformation in the hospital's approach to patient care and operational efficiency. In a facility encompassing multiple buildings with over 1,200 beds and extensive outpatient services, the command center serves as a central hub for operations. It leverages actionable data and AI-driven predictive analysis for real-time decision-making, thus optimizing patient flow and clinical tasks. This strategic evolution from reactive to proactive management is a testament to operational excellence and clinical precision.



KNOW YOUR EXPERT

Manuel Pérez Vallina is the CIO of Hospital General Universitario Gregorio Marañón in Madrid.

Clinical Decision Support: Improving Care Outcomes

Majed Sweis from Elsevier discussed the implementation of Clinical Decision Support (CDS) systems, aligned with the HIMSS EMRAM maturity model. These systems play a crucial role in providing healthcare professionals with access to the latest medical evidence within electronic medical records, facilitating informed and timely clinical decisions. By enhancing patient safety, reducing medical errors, and improving health outcomes, CDS systems are instrumental in moving towards outcome-focused healthcare, a key emphasis of the latest EMRAM criteria.



KNOW YOUR EXPERT

Majed Sweis is the Head of Clinical Decision Support Solutions, MEA at Elsevier Health Solutions EMEA/LA.

The successful implementation and utilization of these advanced systems underscore the necessity of a symbiotic relationship between technology providers and healthcare institutions. A deep understanding of digital maturity models provided by CHIME, HIMSS, and others is essential. This partnership ensures that technology solutions are not only installed but also effectively harnessed to drive significant improvements in healthcare delivery.



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Lemonmint exists to help build a Health Data Society. Everywhere.

Our mission is to facilitate the growth of key stakeholders and strengthen their impact in a data-driven health system.

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Dr. Osama Elhassan, Co-founder and Chair of ZIMAM.

Svetlana Efimova, Managing Director of MWAN Events.

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LIST OF ABBREVIATIONS

AHIMA

American Health Information Management Association

CHIME

Collage of Healthcare Information Management Executives

EMRAM

Electronic Medical Records Adoption Model

GCC

Gulf Cooperation Council

GIDH

Global Initiative on Digital Health

HIMSS

Healthcare Information and Management Systems Society

KSA

Kingdom of Saudi Arabia

NHIC

National Health Information Center

SEMA

Saudi e-Health Maturity Assessment



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