

# *Digital Health Transformation: Creating Pathways to Positively Affect Change*

*AUPHA Closing Keynote  
March 14, 2022*

JoAnn Klinedinst, M.Ed., CPHIMS, PMP,  
DES, CPTD, LFHIMSS, FCAHME

Vice President, Professional Development, HIMSS

DISCLAIMER: The views and opinions expressed in this presentation are solely those of the author/presenter and do not necessarily represent any policy or position of HIMSS.

# *Welcome AUPHA Members!*

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# *Agenda*

- Review HIMSS' Mission and Vision
- Disclose Alignment of Content Presented
- Identify Learning Objectives
- Define Digital Health Transformation
- Examine the Opportunity for Ensuring Health Equity for All
- Identify Four Domains or Topics Encompassing Digital Health Transformation
- Review Various HIMSS Resources Available on Digital Health Transformation
- Q & A



# *Vision*

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

# *Mission*

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

# *Disclosure*



The content used in this presentation aligns to the body of knowledge defined in the HIMSS Certified Professional in Digital Health Transformation Strategy (CPDHTS)<sup>sm</sup> professional certification.

This presentation is intended to be purely educational and is not intended to promote any HIMSS products or services.

# *Learning Objectives*



*Define digital health transformation*



*Examine the role of digital health transformation reducing health inequities*



*Identify the components of digital health transformation*



*Review a comprehensive list of resources available that discusses digital health transformation*



*Q & A*

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*Q & A*

# *Poll #1*

How do you define digital health transformation?

1. A restatement of change management methodology
2. An area that continues to evolve and is difficult to define
3. Concepts at the intersection of innovation and care delivery
4. None of the above
5. All of the above



## *Poll #2*

- Do you currently address the topic of digital health transformation in your program?
- Yes, an entire course
- Yes, but addressed throughout the curriculum
- No
- Currently under development
- No plans to do so

# *Digital Health Transformation: A HIMSS Definition*

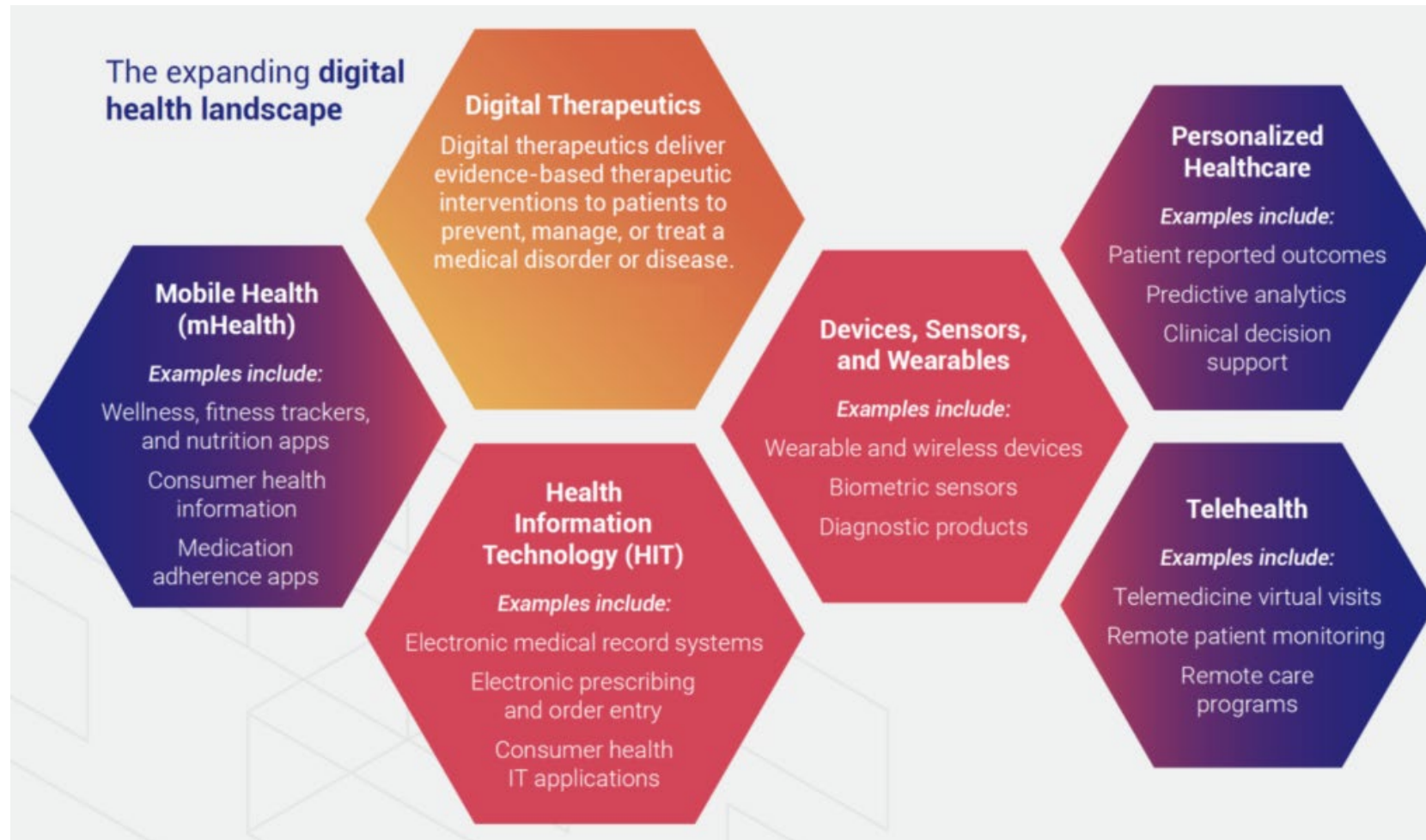
## What is Digital Health?

Digital health connects and empowers people and populations to manage health and wellness, augmented by accessible and supportive provider teams working within flexible, integrated, interoperable and digitally enabled care environments that strategically leverage digital tools, technologies and services to transform care delivery.

The health system of the future will focus on the outcomes of the individual and build a digital ecosystem that provides care when, where and how they need it, safely and securely.

Source: HIMSS. 2022. Retrieved on March 11, 2022 from <https://www.himss.org/what-we-do-solutions/digital-health-transformation#:~:text=Digital%20health%20connects%20and%20empowers,technologies%20and%20services%20to%20transform>

# The digital health landscape



# *Digital Health Transformation: Competency Areas*



## **Governance & Workforce**

Build governance to support sustainable workforce using outcomes data.



## **Interoperability**

Flow data seamlessly across the health system in real-time.



## **Predictive Analytics**

Proactively prioritize population health outcomes, informed by robust analytics, with real-time tracking.



## **Person-Enabled Health**

Use outcomes data to inform design, implementation and scalability of care innovations that are personalized to the unique individual.

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*Q & A*



*“The future of healthcare relies on ensuring the information we have at our fingertips is evaluated and validated to drive the innovation that will create pathways for broadening health equity and improved clinical, financial and operational outcomes.”*

Reid Oakes

Chief Products Officer, HIMSS

# *Creating a Better World: Health Equity for All*

HIMSS defines health equity as the **equal access** to health and wellness services **regardless** of the patient's geographic location, ethnicity, socioeconomic status, gender or other demographic factors.

Source: HIMSS. 2022. Retrieve on March 13, 2022 from <https://www.himss.org/news/creating-better-world-himss-global-health-equity-network#:~:text=At%20HIMSS%2C%20we%20define%20health,gender%20or%20other%20demographic%20factors.>



## *Healthcare Technology Trends to Watch*

1. Telehealth
2. Remote Patient Management and Consumer Digital Health
3. Behavior Health Technology
4. Testing, Tracking, and Diagnostics
5. Health Equity and Community-Centric Innovations



# *HIMSS Top 5 Digital Trends to Be Covered*

## **5 Health Equity and Community-Centric Innovations**

### **BENEFITS**

- Helps address the social determinants of health
- Improves patient access
- Improves population health

### **BARRIERS**

- Finding sustainable solutions
- Funding challenges
- Lack of user-centric design

### **OPPORTUNITIES**

- Encourage public-private partnerships for stronger and more sustainable solutions
- Highlight pandemic data to drive investment in health equity
- Increase access for populations with limited resources

### **DIGITAL DIVIDE:**

A study in the early phase of the pandemic in the U.S. found that persons who were older, insured by Medicaid or did not speak English as a primary language, had completed fewer telehealth visits.

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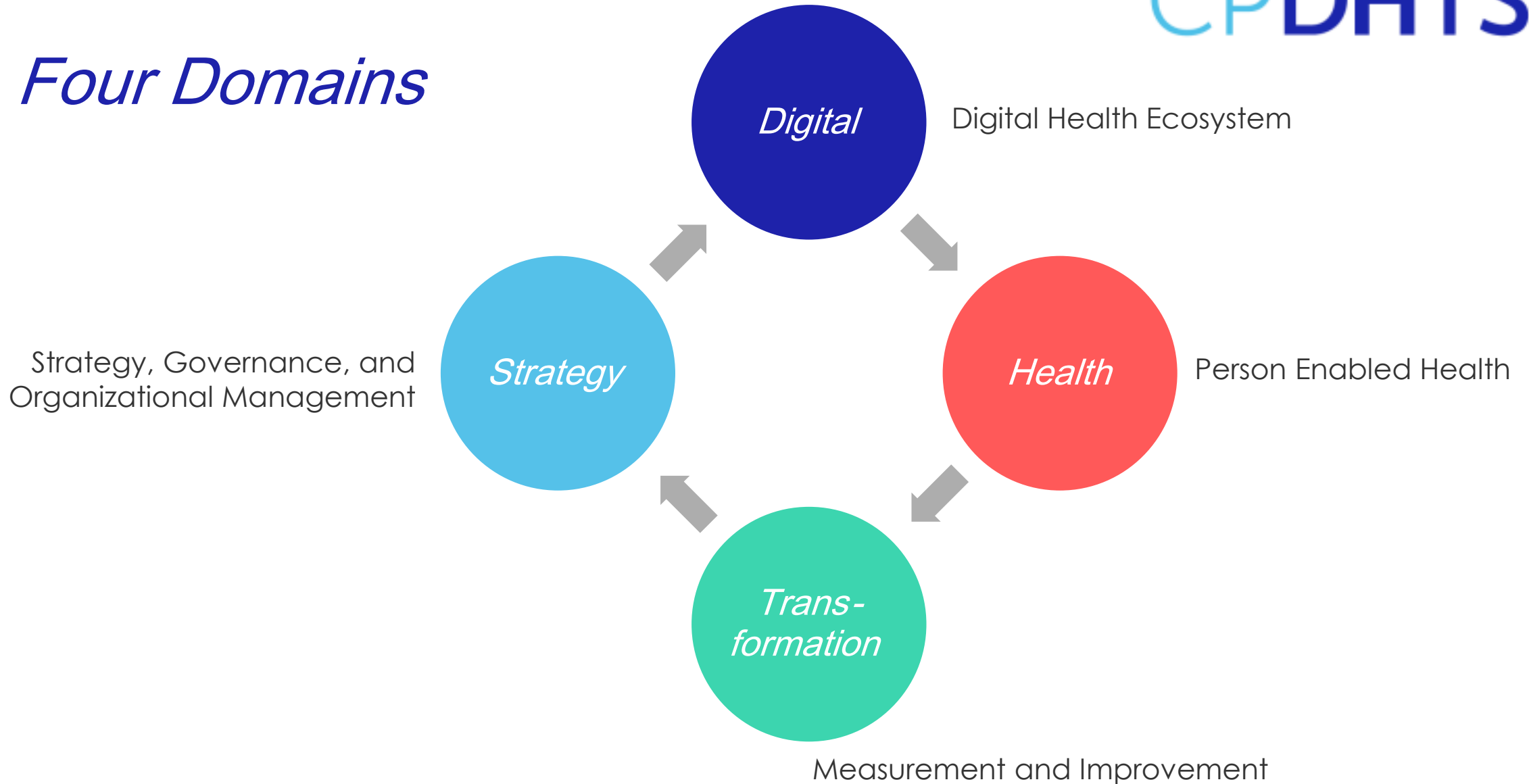


*Review a comprehensive list of resources available that discusses digital health transformation*



*Q & A*

## *Four Domains*



# *Digital Health Ecosystem (Digital)*

## Domain I

### A. Digital Health Information Systems and Technologies

1. Digital health information systems—administrative (e.g., Enterprise Resource Planning [ERP]), clinical information (e.g., Electronic Medical Record [EMR]), and business intelligence (e.g., dashboards)
2. Digital health information technologies (e.g., Internet of Medical Things [IOMT], app ecosystems, Fast Health Interoperability Resource [FHIR], Natural Language Processing [NLP])

### B. Privacy and Security

1. Cybersecurity
2. Cyber-hygiene
3. Techniques for protecting personal information (e.g., communication, applications, databases)
4. Methods and behaviors used by attackers

### C. Emerging Technologies

1. Emerging technologies and trends
2. Risk and benefits of emerging technologies
3. Innovative and emerging projects

### D. Applied Artificial Intelligence and Machine Learning

1. Application of Artificial Intelligence (AI)
2. Application of Machine Learning (ML)

### E. Digital Infrastructure and Interoperability

1. Standards and terminology
2. Cloud-based infrastructure
3. Interoperable systems (e.g., Health Information Exchange [HIE])

### F. Digital Maturity Assessment

1. Digital assets
2. Gap analysis between current and future digital state
3. Standards and compliance implementation

# *PERSONENABLED HEALTH (HEALTH)*

## Domain II

### A. Population Health

1. Population health standards and stakeholders
2. Impact of Social Determinants of Health (SDOH) on digital health transformation
3. Maturity models

### B. Citizen-Driven Informatics

1. Industry applications available on the market (e.g., patient portals, Internet of Things [IoT])
2. Consumer data exchange (e.g., open notes)
3. Shared decision making

### C. Virtual Healthcare Delivery Models

1. Telehealth guidelines, policies, and procedures
2. Remote patient monitoring and connected care services (e.g., e-home monitoring, remote e-ICU monitoring, healthcare robotics)

### D. Patient-Generated Data and Consumer Perception

1. Patient-generated data (e.g., symptom tracker)
2. Patient Reported Experience Measures (PREMs)
3. Other care delivery professionals (e.g., paramedics, social work, care management, PT/OT/SLP)

# *MEASUREMENT AND IMPROVEMENT (TRANSFORMATION)*

## **Domain III**

### **A. Data Science, Clinical and Business Intelligence, and Analytics**

1. Data mining, informatics, and business intelligence (e.g., tools, technologies, market suppliers)
2. Machine learning

### **B. Clinical Outcomes**

1. Patient Reported Outcome Measures (PROMs) (e.g., standard and validated reporting tools, quality performance measures)
2. Clinical quality measures (e.g., process and outcome)

### **C. Stakeholder Satisfaction**

1. Patient satisfaction
2. User Experience (UX)/Usability/User-Centered Design
3. Clinician satisfaction

### **D. Compliance and Adherence**

1. Standards, regulations, policies, and procedures
2. Continuous readiness assessment

### **E. Economic Assessment**

1. Value analysis (e.g., Total Cost of Ownership [TCO])
2. Cost and benefit/efficiency analysis

### **F. Program Planning and Evaluation**

1. Project management processes
2. Monitoring and evaluation techniques

### **G. Sustainability**

1. Continuous improvement techniques (e.g., Six Sigma, Lean)
2. Capacity and capability planning (e.g., human and technical resources)

# *STRATEGY, GOVERNANCE, AND ORGANIZATIONAL MANAGEMENT (STRATEGY)*

## **Domain IV**

### **A. Operational Management (including workforce)**

1. Service management
2. Change management
3. Supply chain management and logistics

### **B. Policy, Regulations, Legislation, and Ethics**

1. Policy, regulatory, and legislative requirements of the applicable jurisdiction
2. Ethical principles (e.g., patient, medication, and staff safety; confidentiality)
3. Consent management

### **C. Leadership**

1. Transformation initiatives to support strategies
2. Relationship building with stakeholders
3. Conflict management
4. Environmental assessment

### **D. Strategy**

1. Scalable initiatives (e.g., pilot to scalable solution)
2. Strategic planning principles (e.g., goal-setting, analysis, strategy formation, strategy implementation, and strategy monitoring)

### **E. Health Equity and Inclusion**

1. Bias in software development (e.g., recognizing and reducing/removing bias in programming or coding)
2. Health equity

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*Q & A*



# *Taking a Deep Dive into Digital Health Transformation: A HIMSS Perspective*

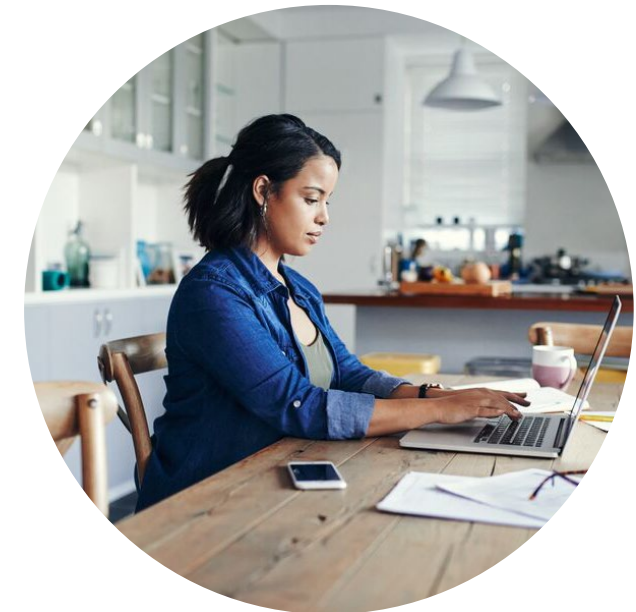


Healthcare **IT** News

CPDHTS

# HIMSS22 Tracks by Topic

Business	Care	Data And Information
<p>Guiding health leaders toward financial sustainability and operational excellence.</p> <ul style="list-style-type: none"><li>• Finance</li><li>• Innovation, Entrepreneurship, Venture Investment</li><li>• Logistics and Supply Chain</li><li>• Marketing and Communications</li><li>• Operations</li><li>• Volume to Value</li></ul>	<p>Equipping caregivers with tools to keep patients and populations healthy.</p> <ul style="list-style-type: none"><li>• Consumers, Caregiver or Patient Experience</li><li>• Health and Wellness</li><li>• Life Sciences</li><li>• Pandemic Response</li><li>• Patient Access</li><li>• Patient Safety</li><li>• Population Health</li><li>• Precision Health and Medicine</li><li>• Public Health</li><li>• Quality Care</li><li>• Telehealth, Connected Health, Virtual Health</li></ul>	<p>Securing and streamlining health information to improve care delivery.</p> <ul style="list-style-type: none"><li>• Artificial Intelligence and Machine Learning</li><li>• Bioinformatics or Healthcare Informatics Research</li><li>• Cybersecurity and Privacy</li><li>• Data Analytics / Data Science</li><li>• Health Information Exchange / Interoperability</li><li>• Informatics</li></ul>
Organizational Governance	Process	Policy
<p>Empowering health leaders to inspire change and lead strategically.</p> <ul style="list-style-type: none"><li>• Digital Health Transformation Leadership</li><li>• Leadership and Management</li><li>• Maturity Models</li><li>• Strategic Planning</li></ul>	<p>Addressing a set of interrelated or interacting activities which transform inputs into outputs.</p> <ul style="list-style-type: none"><li>• Change Management</li><li>• Process Improvement</li><li>• Workflow</li></ul>	<p>Addressing the core issues of digital health with advocacy and public policy.</p> <ul style="list-style-type: none"><li>• Healthcare Reform</li><li>• Legislation</li><li>• Regulation</li><li>• Public Health</li></ul>
Technology	Workforce	
<p>Examining digital solutions that improve care delivery and health management.</p> <ul style="list-style-type: none"><li>• Digital Health</li><li>• Emerging Technologies</li><li>• Healthcare Applications and Technologies</li><li>• Innovation</li><li>• User Experience, Usability, User-Centered Design</li></ul>	<p>Preparing people and organizations to tackle what's next in health and wellness.</p> <ul style="list-style-type: none"><li>• Academic Education</li><li>• Professional Development</li><li>• Workforce Development</li></ul>	



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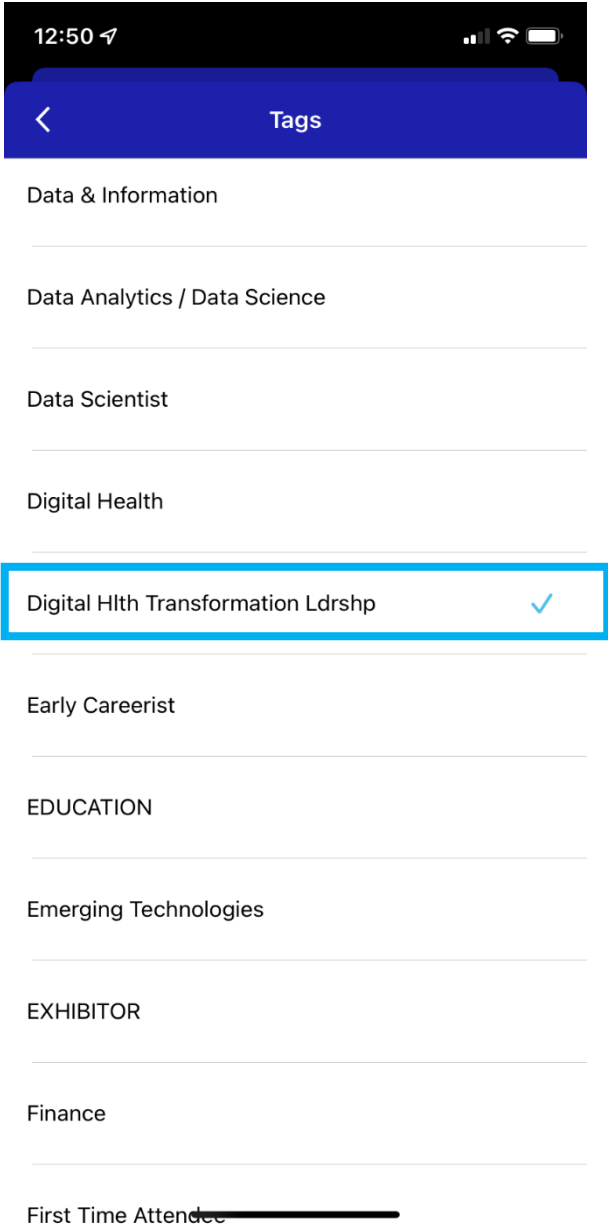
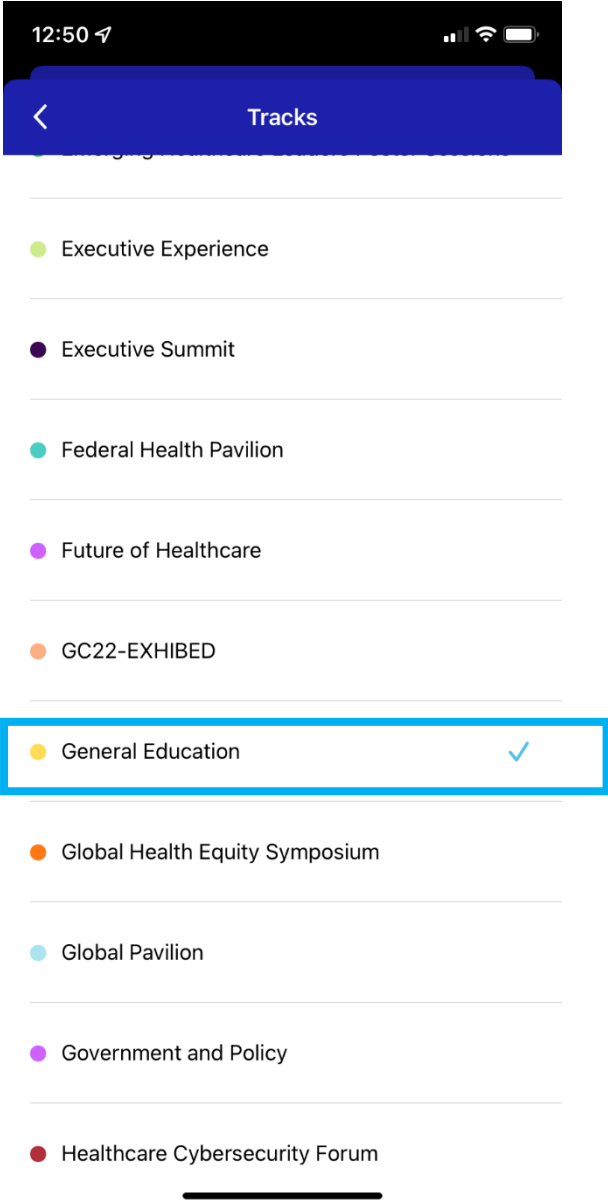
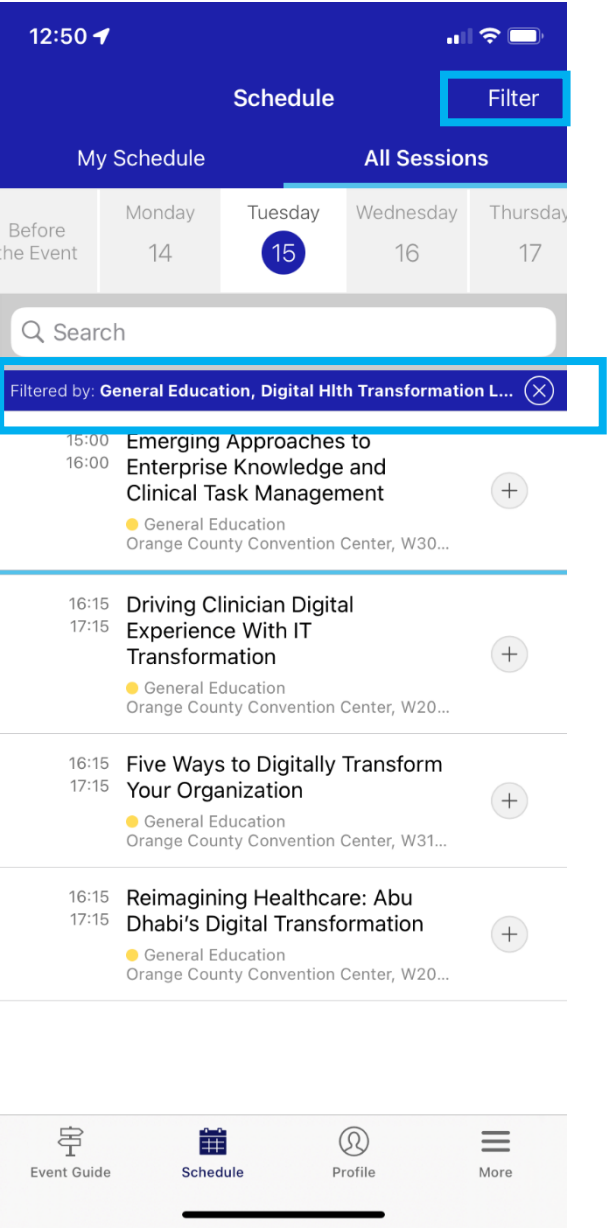
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- X Digital Hlth Transformation Ldrshp (28)
- Leadership (21)
- Maturity Models (5)
- Strategic Planning (5)

# Mobile App Search



2021



CE Type



### SDOH: From A Charity Expense, To Repeatable ROI

HIMSS  HIMSS21

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### Public Health Informatics Symposium: First Steps on the...

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### Leveraging the Power of Crowds to Tackle Everyday Challenges

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# MITRE proposes digital health strategy focused on equity, individual empowerment

The organization noted that COVID-19 could act as an inflection point to address deep-rooted health disparities – but without action, those disparities could be exacerbated.

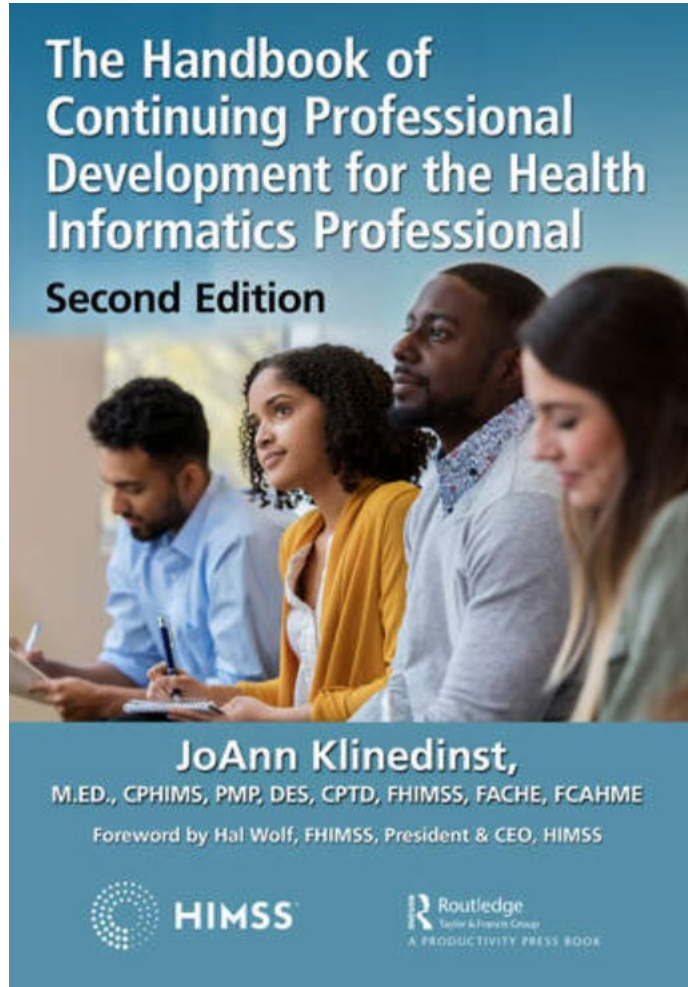


# Digital Health Transformation Comprehensive Reading List

CPDHTS

Revision Date: 01/21/2022	
<b>** Reading List items are subject to change **</b>	
	Type of Content
<a href="#">4 Tactics of Effective Strategic Technology Planning for the Digital Future</a>	Professional Association
<a href="#">A Case Study Perspective to the Digital Transformation of a Hospital's Perioperative Process</a>	Academic Research
<a href="#">A Narrative Review of Current Evidence Supporting the Implementation of Electronic Patient-Reported Outcome Measures in the Management of Chronic Diseases</a>	Academic Research
<a href="#">A Review of Patient and Provider Satisfaction with Telemedicine</a>	Academic Research
<a href="#">A Systematic Review on Healthcare Analytics: Application and Theoretical Perspective of Data Mining</a>	Academic Research
<a href="#">ABC's of DNS, DHCP and IPAM Security</a>	Article, Website
<a href="#">Accelerating Digital Health Transformation Globally: A Comprehensive and Systematic Overview</a>	HIMSS Digital Learning (Course)
<a href="#">Advance Cyberdefence US DoD's CMMC Maturity Level 5</a>	Consultancy Research
<a href="#">Agile Alliance Manifesto</a>	Consultancy Research

# *A Complimentary Chapter for AUPHA Attendees*



## Driving Digital Health Transformation: Achieving a Person-Enabled Health System

Anne Snowden, RN, PhD, FAAN, Professor Strategy and Entrepreneurship, Scientific Director and CEO, SCAN Health Knowledge Mobilization and Exchange Network, Odette School of Business, Canada

### Abstract

There is no doubt that digital health connects and empowers people and populations to manage their health and wellness. The person-enabled health system will be augmented by accessible and supportive provider teams working within flexible, integrated, interoperable and digital-enabled care environments. The teams will strategically leverage digital tools to connect meaningfully to patients, to share and receive insights, knowledge and outcomes to advance understanding of the person-enabled health system, fueled by digital health transformation.

### Learning Objectives

- 1) Identify the importance of personalized health care on achieving value and impact as relates to what matters to people, their quality of life, health and wellness, and the role of the healthcare provider in a digital health ecosystem;
- 2) Examine the importance of the empowered consumer as a motivating factor in the use of technology and the ways in which health systems and consumers can learn from each other.



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*Q & A*

*Questions?*



**HIMSS**

JOANN KLINEDINST, M.ED., CPHIMS, PMP, DES, CPTD, LFHIMSS, FACHE, FCAHME  
VP Professional Development

350 N. Orleans St. | Suite S10000 | Chicago, IL 60654

T 312.915.9515 | M 215.530.5330 | E [Joann.Klinedinst@himss.org](mailto:Joann.Klinedinst@himss.org) |



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*Thank you*