Impact of Mobility on Care Coordination

HIMSS North America

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Today's Presenter

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Let's Have a Conversation: Why Mobile?

- The mobile health market, is expected to reach $26 billion by 2017, according to 2013 report, Mobile Health Trends and Figures 2013-2017, from Research and Markets.[1]

- A June 2013 Nielsen report indicated 3 out of 5 U.S. mobile subscribers, or more than 60 percent, own a smartphone, which is comparable to having an internet-enabled computer in their pocket. [2]

- According to industry estimates, 500 million smartphone users worldwide will be using a health care application by 2015, and by 2018, 50 percent of the more than 3.4 billion smartphone and tablet users will have downloaded mobile health applications.[3]

- Today, mobile devices are more powerful than ever before. A typical smartphone has more computing power than Apollo 11 did when it landed on the moon.[4]

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Drivers of Change and Managerial Approaches in Connected Health

- Key Drivers
  - Regulatory Requirements
  - Health Care Costs
  - Integrated Accountable Care
  - Emerging Technologies
  - Consumer Empowerment

- Managerial Approaches
  - Provide Information
  - Influence Decisions
  - Assess Lower Cost Options
  - Provide Access to Health System(s) and Connection to Providers
  - Retain Patients in Network
  - Support Ongoing Health Management

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Emerging and Existing Topics in Health Policy

- Drivers of Change
  - Medicare Sustainable Growth Rate (SGR) – Doc Fix
  - Medicare Payment Advisory Commission and Independent Medicare Payment Advisory Board (IPAB)
  - Meaningful Use Program
- Managerial Approaches – Influence Decisions to Changes in Cost
  - Government Relations (GR) Review and Comment on Physician Fee Schedule
  - Maintain Active Engagement With Advocacy Groups and Internal GR

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Financial Considerations

- Drivers of Change
  - Integrated Accountable Care Organizations
  - Hospital Readmission Penalty Program
  - Private Insurance Market Self Insurance
  - Consumer Driven Disintermediation

- Managerial Approaches - Provide Access to Health System(s) and Connection to Providers via Dashboards and Analytics – Watch for Expansion into Chronic and Population Health Management

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Benefits of Patient Centered Coordinated Care

- Coordinated care through the implementation of an EMR (Internal Exchange of Information)
  - Up to 92% reduction in adverse drug events
  - 7.1% reduction in average length of stay
  - 50% reduction in serious medical errors
  - 30% reduction in medication waste
  - And more…

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Benefits of Patient Centered Coordinated Care

".. emerging evidence is that patients who are actively involved in their health and health care achieve better health outcomes, and have lower health costs, than those who aren't."

The Patient Portal at Essentia Health (Stage 7 Primary Care EMRAM)

- 44% reduction in unnecessary admissions for high risk chronic disease patients through use of Patient Portal
- From 7% to 78% compliance on following asthma protocols
- CHF patients supplied Blue-tooth enabled weight scales
  - 42% reduction in annual admission rate

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doi: 10.1377/hlthaff.2013.0037 *Health Aff February 2013 vol. 32 no. 2 202*
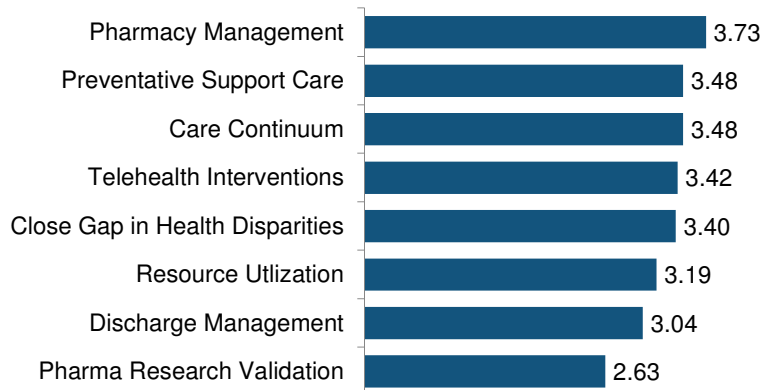http://www.forbes.com/sites/davechase/2012/09/09/patient-engagement-is-the-blockbuster-drug-of-the-century/

Use of Mobile Technology to Support Care – Top Ten

Item	Future Policy
View patient information	69%
Look up non PHI information	65%
Use for education/training	49%
Clinical notifications	41%
Secure communications regarding patients	39%
Tracking worklists	39%
Collecting data at the bedside	36%
E-prescribing	33%
Use bar code reader on device	28%
Monitor data from medical devices	26%

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Areas in Which Technologies Can Impact Coordinated Care

Area	Value
Pharmacy Management	3.73
Preventative Support Care	3.48
Care Continuum	3.48
Telehealth Interventions	3.42
Close Gap in Health Disparities	3.40
Resource Utlization	3.19
Discharge Management	3.04
Pharma Research Validation	2.63

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TECHNOLOGY CONVERGENCE

Mobile, Sensors, Payment reform, Big Data, Consumerism, Coordinated Care, Network Connectivity
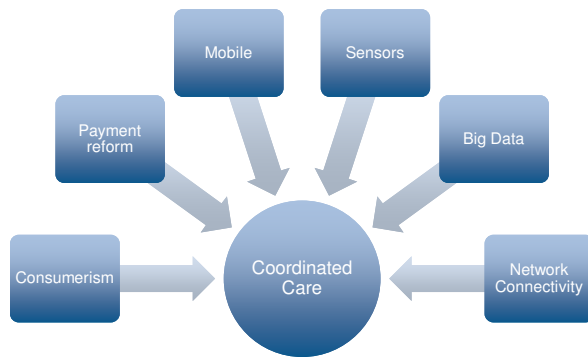
Examples
Diabetes Management
Smartphone accessories for monitoring
MBAN sensors
Mobile, low-cost, cloud-based imaging mgt.
Condition-specific solutions incorporating mobility
Mobile patient management with social components

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Medical Body Area Network (MBAN)

• **"On body" Spectrum allocation**

– U.S. first in world to allocate spectrum for wireless medical devices

• **MBAN technology consists of small, low-powered sensors on body that capture clinical information such as: Temperature, Respiratory function**

– Permit greater in-Hospital patient mobility as patient recovers

– Information moved across wireless and wireline networks

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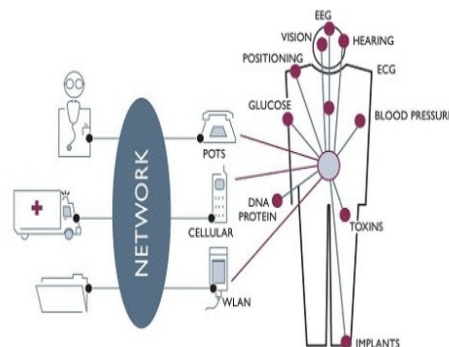
System Of Engagement

People view themselves as consumers of healthcare throughout the care continuum
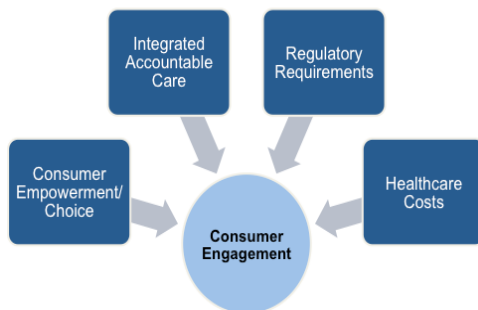
Mobile technology enabling consumers to:

- Better manage health
- Make better healthcare decisions
- Find appropriate care
- Engage and access providers
- Manage ongoing health
- Better access to information

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Consumer Engagement Shifting…

Key Drivers

Integrated Accountable Care

Regulatory Requirements

Consumer Empowerment/ Choice

Healthcare Costs

Consumer Engagement

Support Provider Initiatives

Provide Consumer Decision Support

Support Ongoing Health Management

Influence Consumer Choice

Consumer Engagement

Retain 'Patients' in Health System or Network

Steer To Lower Cost, In-Network Providers

Provide Access To The Health System And Connection To Providers

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From Home to Hospital Back To Home

Patient Seeks Care		Patient Transitions to Chronic Care Monitoring Kit	
Patient with a Planned Procedure at Hospital		Patient Enters Hospital	
Patient Requiring Long-Term Care		Early Patient Discharge/Su pplied Monitoring Kit	

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Overarching Technology Trends Requiring Bandwidth

- **Remote Patient Monitoring**

  Technologies that enable remote surveillance of patient vital functions through the use of internally and externally located patient devices.

- **Mobile System Access**

  Mobile technologies that enable remote/virtual access to current clinical systems:
  – Electronic health records [EHRs]
  – Picture archiving and communication systems [PACS]
  –SMART FHIR Standards

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Aspects to Consider

- **Infrastructure**
  - Cellular coverage in hospitals
  - Wi-Fi offloading and Managed Wi-Fi
  - Guest Internet access
  - How hospitals are crafting an environment to engage patients within and outside the hospital

- **Emerging Opportunities**
  - How to assess and plan for new technologies
  - Address issues of workflow and satisfaction
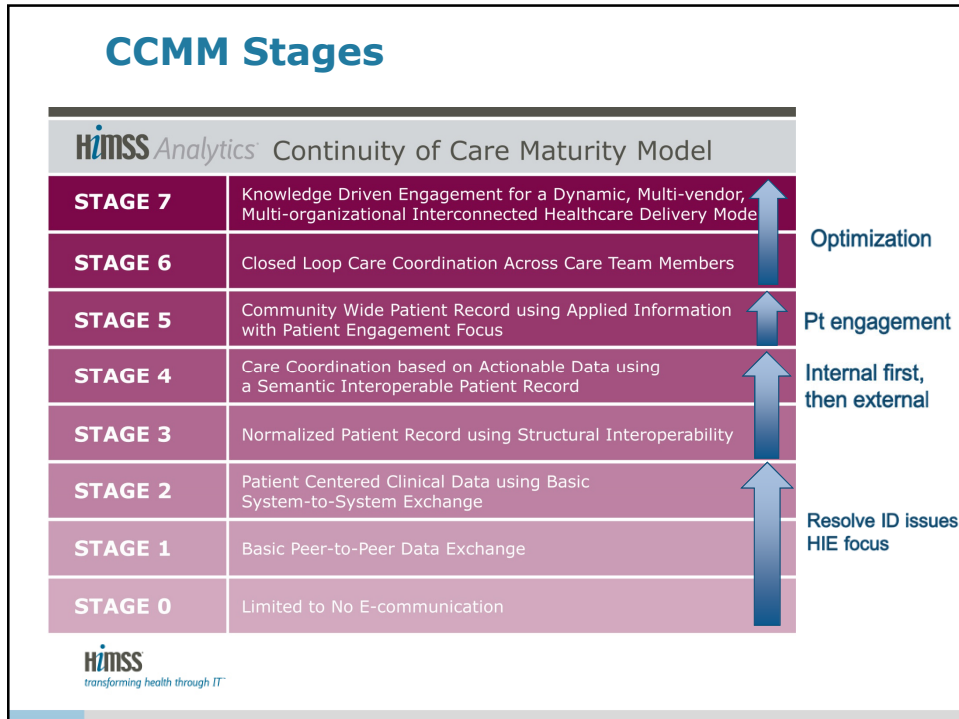 - How Meaningful Use will play a role in healthcare delivery via mobile devices – Stage 3

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CCMM and the Health IT Value STEPS™

Davies Program	CCMM Pillars | EMRAM
S Satisfaction	• Increase in overall patient satisfaction
T Treatment/Clinical	• Improved clinical documentation
E Electronic Information/Data	• Improved claims management
P Prevention/ Patient Education	• Increased immunizations • Increased cancer screenings
S Savings	• Increased patient volume • Reduction in days accounts receivable

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CCMM Stages

HIMSS *Analytics* Continuity of Care Maturity Model

STAGE 7	Knowledge Driven Engagement for a Dynamic, Multi-vendor, Multi-organizational Interconnected Healthcare Delivery Model
STAGE 6	Closed Loop Care Coordination Across Care Team Members
STAGE 5	Community Wide Patient Record using Applied Information with Patient Engagement Focus
STAGE 4	Care Coordination based on Actionable Data using a Semantic Interoperable Patient Record
STAGE 3	Normalized Patient Record using Structural Interoperability
STAGE 2	Patient Centered Clinical Data using Basic System-to-System Exchange
STAGE 1	Basic Peer-to-Peer Data Exchange
STAGE 0	Limited to No E-communication

Optimization

Pt engagement

Internal first, then external

Resolve ID issues
HIE focus

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3rd Annual HIMSS Analytics Mobile Technology Survey

- Clinicians are most likely to use technology to support patient care by either:
  - Looking up patient information; or
  - Looking up non PHI (personal health information).

- For the second consecutive year, pharmacy management topped providers' lists as the most likely use of mobile technologies, including medication reminders or medication reconciliation.

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HIMSS Mobile Resources

www.himss.org/mobilehealthit

- The mHealth Community provides critical updates on mobile health IT policy, industry thought leadership, and the opportunity to network with stakeholders across the mHealth ecosystem.

- Monthly Open Mic (45 open mic)
  - **4ᵗʰ Friday of Every Month 1 PM**
  - 4 facilitated questions with keynote speaker Committee discussants

Join Us
  - Join us by signing on at HIMSS Member Center, selecting "other HIMSS initiatives" and mHealth Community
  - Following activities and available resources at www.himss.org/mHealth
  - For more information on the HIMSS mHealth Community please contact us at mHealth@himss.org

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HIMSS Mobile Resources – Case Studies
www.himss.org/mobilehealthit

Use Case Study: Geisinger Health System: Reducing Patient No-Shows
Patients missing appointments represents significant cost to providers, as well as reduces patient satisfaction and impacts quality of care. As part of its patient engagement initiative, Geisinger Health System implemented a platform to do text messaging and selected appointment reminders.

Use Case Study: Geisinger Health System: Weight Management Text Program
Patient lack of compliance to care plans is a barrier to successful chronic disease management. Geisinger Health System implemented a text message program to better engage patients and improve the quality of care.

Use Case Study: Vanderbilt University Medical Center: Hand Hygiene Monitoring App
According to the Centers for Disease Control and Prevention, keeping hands clean is the single most important way to prevent the spread of infection from one patient to another patient. The mobile app developed internally for tracking hand hygiene compliance at Vanderbilt University Medical Center has proven to be the right answer at the right time to effectively address this critical patient safety issue.

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Continua and Personal Connected Health Alliance

Have a conversation about:

- How your organization is:
  - Communicating with patients when they are not present in your clinic.

Questions?