Patient Centered Care – The Real Purpose of Meaningful Use

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Clinical Director, REACH
Conflict of Interest

• Dr. Kleeberg is the Clinical Director for the Minnesota - North Dakota Regional Extension Assistance Center for HIT (REACH) – An ONC REC

• Dr Kleeberg also serves on the Physician Advisory Board for Elsevier

• No other conflict of interest
Objectives

• Know why there is urgency to implement EHRs
• Be able to identify reasons why patient engagement is important
• Understand how effective patient engagement leads to better health and better health care
• Be able to identify the ways meaningful use fosters patient engagement
• Leave with a vision of how to begin engaging and empowering the lives in your care
Outline

• Review Why
• Evidence for EHRs
• Meaningful use driving adoption
• The big deal about patient engagement
• Meaningful use and patient engagement
• So how do we do this?
Spending and Life Expectancy 1976

Adapted from a slide by Sherry Glied, Wagner School, NYU
Spending and Life Expectancy 1986

Adapted from a slide by Sherry Glied, Wagner School, NYU
Spending and Life Expectancy 1996

Adapted from a slide by Sherry Glied, Wagner School, NYU
Spending and Life Expectancy 2006

Adapted from a slide by Sherry Glied, Wagner School, NYU
Spending and Life Expectancy 2011

Modeled after slides by Sherry Glied, Wagner School, NYU
Medical costs for a family of four >doubled in 10 years

The proportion of U.S. workers covered by employer health insurance fell from 69% in 2010 to 61% in 2012. Covered workers are also facing more complex CDHP financial arrangements along with clinical decision making responsibilities.

Source: Milliman Medical Index, 2004-2012

Slide courtesy of Jan Oldenburg, Oldenburg Consulting and Mary Griskewicz, HIMSS
Growing incentives for wellness at the workplace: Addressing workers’ bad health habits is #1 job for employer health benefit programs

Employers are allocating resources to wellness programs and population health management that targets both biometrics (e.g., lowering BMI) and specific health conditions such as diabetes and heart disease.

- Overuse of care through providers recommending too much care: 14%
- Higher costs due to new medical technologies: 15%
- Cost of compliance under the PPACA: 16%
- Poor information on provider costs: 18%
- Overuse of care through employees seeking too much care: 18%
- Poor employee understanding of how to use the plan: 26%
- Escalating cost of pharmacy benefits: 28%
- Underuse of preventive services: 31%
- High cost catastrophic cases and end-of-life care: 39%
- Employees’ poor health habits: 66%


Slide courtesy of Jan Oldenburg, Oldenburg Consulting and Mary Griskewicz, HIMSS
Internet Adoption 1993-2013

% of American adults (age 18+) who use the internet, over time. As of May 2013, 85% of adults use the internet.

More: http://pewinternet.org/Trend-Data/Internet-Adoption.aspx
## Who is Using the Internet?

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Americans 18+ (n=2,252)</td>
<td>85%</td>
</tr>
<tr>
<td>Men (n=1029)</td>
<td>86%</td>
</tr>
<tr>
<td>Women (n=1,223)</td>
<td>85%</td>
</tr>
<tr>
<td><strong>Race/ethnicity</strong></td>
<td></td>
</tr>
<tr>
<td>White, Non-Hispanic (n=1,571)</td>
<td>85%</td>
</tr>
<tr>
<td>Black, Non-Hispanic (n=252)</td>
<td>85%</td>
</tr>
<tr>
<td>Hispanic (Eng and Spanish-speaking (n=249)</td>
<td>76%</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
</tr>
<tr>
<td>18-29 (n=404)</td>
<td>97%</td>
</tr>
<tr>
<td>30-49 (n=577)</td>
<td>93%</td>
</tr>
<tr>
<td>50-64 (n=641)</td>
<td>83%</td>
</tr>
<tr>
<td>65+ (n=570)</td>
<td>56%</td>
</tr>
<tr>
<td><strong>Education Attainment</strong></td>
<td></td>
</tr>
<tr>
<td>No high school diploma (n=168)</td>
<td>59%</td>
</tr>
<tr>
<td>High school grad (n=630)</td>
<td>78%</td>
</tr>
<tr>
<td>Some college (n=588)</td>
<td>91%</td>
</tr>
<tr>
<td>College + (n=834)</td>
<td>96%</td>
</tr>
<tr>
<td><strong>Household Income</strong></td>
<td></td>
</tr>
<tr>
<td>Less than $30,000 (n=168)</td>
<td>59%</td>
</tr>
<tr>
<td>$30,000 - $49,999 (n=374)</td>
<td>88%</td>
</tr>
<tr>
<td>$50,000 - $74,999 (n=298)</td>
<td>94%</td>
</tr>
<tr>
<td>$75,000+ (n=582)</td>
<td>96%</td>
</tr>
<tr>
<td><strong>Urbanity</strong></td>
<td></td>
</tr>
<tr>
<td>Urban (n=763)</td>
<td>85%</td>
</tr>
<tr>
<td>Suburban (n=1,037)</td>
<td>86%</td>
</tr>
<tr>
<td>Rural (n=450)</td>
<td>80%</td>
</tr>
</tbody>
</table>

### Patients Want More Accessible, Coordinated, Well-Informed Care

<table>
<thead>
<tr>
<th>Percent reporting it is very important/important that:</th>
<th>Total very important or important</th>
</tr>
</thead>
<tbody>
<tr>
<td>You have easy access to your own medical records</td>
<td>94%</td>
</tr>
<tr>
<td>All your doctors have easy access to your medical records</td>
<td>96%</td>
</tr>
<tr>
<td>You have information about the quality of care provided by different doctors/hospitals</td>
<td>95%</td>
</tr>
</tbody>
</table>

Our needs are not being met

Harris Interactive Poll 2012

<table>
<thead>
<tr>
<th>Service</th>
<th>Important or very important %</th>
<th>My doctor already does this %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online access to clinical data</td>
<td>65%</td>
<td>17%</td>
</tr>
<tr>
<td>Online cost estimator</td>
<td>62%</td>
<td>6%</td>
</tr>
<tr>
<td>Preventive care reminders</td>
<td>57%</td>
<td>12%</td>
</tr>
<tr>
<td>Email access to your doctor</td>
<td>53%</td>
<td>12%</td>
</tr>
<tr>
<td>Online appointments</td>
<td>51%</td>
<td>11%</td>
</tr>
<tr>
<td>Online billing &amp; payments</td>
<td>50%</td>
<td>10%</td>
</tr>
</tbody>
</table>

Slide courtesy of Jan Oldenburg, Oldenburg Consulting and Mary Griskewicz, HIMSS
Outline

- Review Why
- **Evidence for EHRs**
  - Meaningful use driving adoption
  - The big deal about patient engagement
  - Meaningful use and patient engagement
- So how do we do this?
Health Information Technology Impact on Quality, Efficiency and Cost (2006)


• 257 studies met the inclusion criteria of which 25% were from 4 academic institutions with internally developed systems
  – Brigham and Women’s Hospital in Boston
  – LDS Hospital in Salt Lake City
  – Vanderbilt University Medical Center in Nashville
  – The Regenstrief Institute in Indianapolis

• Those 4 institutions (and only those 4) demonstrated
  – Benefits on quality:
    • Increased adherence to guideline-based care
    • Enhanced surveillance and monitoring
    • Decreased medication errors.
  – Benefit of improvement
    • Preventive health (DVT, pressure ulcers and post-op infections)
  – Efficiency benefit
    • Decreased utilization of care.
EHRs: Problems with Commercial Installations (2005 – 2007)

  – The rapid implementation of a minimally modified, commercially available CPOE system in a pediatric critical care unit was associated with an increase in mortality rate for children admitted via interfacility transport over a 5-month period.

  – Evaluated 50,000 patient records from over 1500 physician practices in 2003 and 2004 and found: “As implemented, EHRs were not associated with better quality ambulatory care.”
  – Acknowledged the positive information came from 4 “benchmark” institutions
Local Customization of CPOE Improves Quality (2010 – 2012)

  – Pre and Post implementation of a locally modified CPOE and electronic nursing documentation system at quaternary care academic children’s hospital demonstrated a monthly adjusted mortality rate decreased by 20%

  – A review of 148 randomized, controlled trials of electronic CDSSs implemented in clinical settings, used at the point of care and reported either clinical, health care process, workload, relationship-centered, economic, or provider use outcomes.
  – Both commercially and locally developed clinical decision-support systems (CDSSs) showed statistical significance in improved health care process measures related to performing preventive services, ordering clinical studies and prescribing therapies across diverse settings.
HealthPartner’s Experience

Source: Alan Abramson, MN eHealth Conference May 2013
Outline

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• **Meaningful use driving adoption**
• The big deal about patient engagement
• Meaningful use and patient engagement
• So how do we do this?
The Federal HITECH Act Framework

http://healthcarereform.nejm.org/?p=2669
ONC HIT Regional Extension Centers

- What is the project, its goals, and who are our partners in implementing it?
  - 62 HIT Regional Extension Centers nationwide
  - Have subsidies to assist primary care providers in small practices and hospitals with under 50 beds to achieve meaningful use
  - Regions do not overlap
    - Collaborate with other RECs via the ONCs HIT Resource Center
      - Communities of Practice
      - Sharing of toolkits and resources
Adoption

• Hospitals:¹
  – Having a basic EHR System
    • 9.4% in 2008 – 44.4% in 2012
  – 85% possessed a certified EHR in 2012

• Professionals²
  – Using any type of EHR:
    • 18% in 2001 => 78% in 2013
  – Owned a basic system:
    • 11% in 2006 => 48% in 2013

¹. ONC Data Brief #9, Mar 2013: http://www.healthit.gov/sites/default/files/onc databrief9final.pdf
². CDC NCHS Data Brief Number 143, Jan 2014 http://www.cdc.gov/nchs/data/databriefs/db143.htm
Regional Extension Centers

• As of November 2013:
  – 137,000 of the nation’s primary care providers were enrolled with a REC (nearly half)
  – Of these, more than 124,000 (90%) went live with an EHR
  – Of these, over 85,000 (69%) have demonstrated meaningful use

http://www.healthit.gov/buzz-blog/regional-extension-centers/recs-surpassed-goals-increase-ehr-adoption/
<table>
<thead>
<tr>
<th>Stage</th>
<th>Cumulative Capabilities</th>
<th>2011 Q2</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 7</td>
<td>Complete EMR; CCD transactions to share data; Data warehousing; Data continuity with ED, ambulatory, OP</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Stage 6</td>
<td>Physician documentation (structured templates), full CDSS (variance &amp; compliance), full R-PACS</td>
<td>0.5%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Stage 5</td>
<td>Closed loop medication administration</td>
<td>0.2%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Stage 4</td>
<td>CPOE, Clinical Decision Support (clinical protocols)</td>
<td>1.7%</td>
<td>3.8%</td>
</tr>
<tr>
<td>Stage 3</td>
<td>Nursing/clinical documentation (flow sheets), CDSS (error checking), PACS available outside radiology</td>
<td>33.2%</td>
<td>32.2%</td>
</tr>
<tr>
<td>Stage 2</td>
<td>CDR, Controlled Medical Vocabulary, CDS, may have Document Imaging, HIE capable</td>
<td>23.9%</td>
<td>29.1%</td>
</tr>
<tr>
<td>Stage 1</td>
<td>Ancillaries – Lab, Rad, Pharmacy – All Installed</td>
<td>12.2%</td>
<td>14.5%</td>
</tr>
<tr>
<td>Stage 0</td>
<td>All Three Ancillaries Not Installed</td>
<td>28.3%</td>
<td>19.8%</td>
</tr>
</tbody>
</table>

Data from HIMSS Analytics® Database © 2012 HIMSS Analytics

N = 639  N = 640
## US EMR Adoption Model℠

<table>
<thead>
<tr>
<th>Stage</th>
<th>Cumulative Capabilities</th>
<th>2011 Q2</th>
<th>2013</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 7</td>
<td>Complete EMR, CCD transactions to share data; Data warehousing; Data continuity with ED, ambulatory, OP</td>
<td>1.1%</td>
<td>2.9%</td>
<td>+160%</td>
</tr>
<tr>
<td>Stage 6</td>
<td>Physician documentation (structured templates), full CDSS (variance &amp; compliance), full R-PACS</td>
<td>4.0%</td>
<td>12.5%</td>
<td>+212%</td>
</tr>
<tr>
<td>Stage 5</td>
<td>Closed loop medication administration</td>
<td>6.1%</td>
<td>22.0%</td>
<td>+260%</td>
</tr>
<tr>
<td>Stage 4</td>
<td>CPOE, Clinical Decision Support (clinical protocols)</td>
<td>12.3%</td>
<td>15.5%</td>
<td></td>
</tr>
<tr>
<td>Stage 3</td>
<td>Nursing/clinical documentation (flow sheets), CDSS (error checking), PACS available outside radiology</td>
<td>46.3%</td>
<td>30.3%</td>
<td></td>
</tr>
<tr>
<td>Stage 2</td>
<td>CDR, Controlled Medical Vocabulary, CDS, may have Document Imaging, HIE capable</td>
<td>13.7%</td>
<td>7.6%</td>
<td>-45%</td>
</tr>
<tr>
<td>Stage 1</td>
<td>Ancillaries – Lab, Rad, Pharmacy – All Installed</td>
<td>6.6%</td>
<td>3.3%</td>
<td>-50%</td>
</tr>
<tr>
<td>Stage 0</td>
<td>All Three Ancillaries Not Installed</td>
<td>10.0%</td>
<td>5.8%</td>
<td>-42%</td>
</tr>
</tbody>
</table>

Data from HIMSS Analytics® Database © 2012 HIMSS Analytics

N = 5439

N = 5458
Outline

• Review Why
• Evidence for EHRs
• Meaningful use driving adoption
• The big deal about patient engagement
• Meaningful use and patient engagement
• So how do we do this?
Why is this important?

• Patients at higher levels of activation had more positive experiences than patients at lower levels seeing the same clinician

• Activated patients have better health outcomes
Patient Activation Measure

• Criteria
  – Believes active role is important
  – Confidence and knowledge to take action
  – Taking Action
  – Staying the course under stress

PAM Scores as a Predictor
Study demonstrating PAM scores predict utilization and health outcomes two years into the future for diabetics

<table>
<thead>
<tr>
<th></th>
<th>% change for a 1 point change in PAM Score</th>
<th>Comparing a PAM Score of 70 (L4) vs. 50 (L2)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospitalization</td>
<td>1.7% decline</td>
<td>34% decreased likelihood of hospitalization</td>
<td>.03</td>
</tr>
<tr>
<td>Good A1c control (HgA1c &lt; 8%)</td>
<td>1.8% gain</td>
<td>40% greater likelihood of good glycemic control</td>
<td>.01</td>
</tr>
<tr>
<td>A1c testing</td>
<td>3.4% gain</td>
<td>68% improvement in testing</td>
<td>.01</td>
</tr>
<tr>
<td>LDL-c testing</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Multivariate analysis which controlled for age group, gender, race, co-morbidities and number of diabetes-related prescriptions.
Compliance ≠ Patient Engagement

Source: AMA Health Literacy Video - Short Version
http://www.youtube.com/watch?v=ubPkdpGHWAQ
Benefits of Patient and Family Engagement and Hospital Performance

• Overall improvements in quality and safety
  – A new visitation policy to promote patient and family engagement, corresponded with a 62 percent reduction in medication errors, a 40 percent reduction in falls, and a 50 percent decrease in length of stay

• Improved patient outcomes
  – Emotional health, symptom resolution, pain control, physiological measures.
  – Reduction in preventable readmissions

• Improved CAHPS Hospital Survey scores
  – Engagement strategies have led to an increase in patient satisfaction scores from the 10th to the 95th percentile.

• Better responses to the Joint Commission
  – Standards for patients and families to be active and informed decision-makers

AHRQ Guide to Patient and Family Engagement in Hospital Quality and Safety
Benefits of Patient and Family Engagement and Hospital Performance

• Improved financial performance
  – Decreased litigation and malpractice claims
  – Lower costs per case due to complications
  – Improved patient flow
  – Less waste associated with higher call volume, repetitive patient educations efforts, diagnostic tests

• Enhanced market share and competitive
  – Increase in new and returning patients by incorporating patient-and family-centered care into their business model

• Increased employee satisfaction and retention
  – A facility decreased the average nurse turnover rate (from 21 to 7 percent)

AHRQ Guide to Patient and Family Engagement in Hospital Quality and Safety
Part of Engaging Patients in Their Care

• Clinical summaries
• Patient-specific education resources
• Provide patients with electronic access to their health record
• Patient reminders for follow-up care
• Secure messages from patients
Information for patients and the provider

• Electronic Exchange of Information
• Referral/Transfer of care summary
• Imaging results
• Labs as structured data
Outline

• Review Why
• Evidence for EHRs
• Meaningful use driving adoption
• The big deal about patient engagement
• Meaningful use and patient engagement
• So how do we do this?
But….It’s Not Really a Technology Problem

• eAccess is very important
• eAccess is not enough
• A paradigm shift that begins with seeing the patient as an active partner will naturally result in granting access to records
• A mandate to provide access to records will not naturally result in a paradigm shift to seeing the patient as an active partner
Keys to successful patient engagement strategies

Convenience
• Meet them where they are
• Provide services that simplify their lives
• Make every interaction simple, seamless

Connection
• with caregivers and friends
• with their doctors and care team
• with people like them

Relevant & Timely Data
• about them
• about their diseases, conditions, drugs, tests
• that can help them make choices
• that can educate and encourage them

Slide courtesy of Jan Oldenburg, Oldenburg Consulting and Mary Griskewicz, HIMSS
HEALTH REFORM

Actions to Build Capacity for the Triple Aim and Succeed in Multiple Payment Models

**Actions to Build the Foundation**

- Provide Visionary Leadership and Promote a Learning Culture
- Embed Strong Organizational Change Skills Supported by Quality Improvement Methods
- Redesign Care to Consistently Use Evidence-based or Best Practices
- Establish an Enabling IT Platform with Interoperable EHR and Effective HIE

**Actions to Build Relationships, Manage Populations and Add Value**

- Engage and Activate Patients
- Focus on the Health and Wellbeing of Populations
- Use Robust Data Analytics and Measurement Systems
- Develop Meaningful Collaborations and Partnerships
- Extend Care Coordination for Complex Patients into the Community

**Outcomes**

- Better Care
- Better Health
- Lower Cost

Resources

• HIMSS

• Stratis Health/REACH

• AHRQ Guide to Patient Engagement for Hospitals
Stratis Health is a nonprofit organization that leads collaboration and innovation in health care quality and safety, and serves as a trusted expert in facilitating improvement for people and communities.

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