AHRQ: Research, Tools, and Data to Build the Learning Health System

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Personal Career Trajectory: A Retrospective Based on 2 Jobs

- Research Fellowship: RWJF-CSP
- **Joined faculty at UCSF in 1989**
- Established health services research expertise over time
- Yearlong experience in UK which sharpened understanding of US
- Academic leadership - DGIM Chief at SFGH
- Health Policy Fellowship: RWJF
- Participatory research with state/fed policymakers
- **AHRQ Director since May 2016**
Some Themes Over Time

- Evolving from “I” to “we”
- An interdisciplinary “we”
- Generalism is a leadership asset
- Adjusting voice to align with the position
- Different cultures of determining truth
- Anticipation more than speed
Session Objectives

• Overview of AHRQ’s mission, areas of emphasis, and key initiatives

• Describe a learning health system, including opportunities to support the generation, adoption, and application of evidence at the frontlines of care

• Hear **YOUR** thoughts on what is most critical for AHRQ to address
To produce evidence to make health care safer, higher quality, more accessible, equitable, and affordable, and to work within HHS and with other partners to make sure that the evidence is understood and used.
AHRQ’s main point of contact with the primary care community, communicating the evidence from AHRQ's research—and how this evidence can be used to improve health and primary health care—to researchers, primary care professionals, health care decisionmakers, and patients and families

www.ahrq.gov/professionals/systems/primary-care
How AHRQ Makes a Difference

- AHRQ invests in research and evidence to understand how to make health care safer and improve quality.
- AHRQ creates materials to teach and train health care systems and professionals to catalyze improvements in care.
- AHRQ generates measures and data used to track and improve performance and evaluate progress of the U.S. health system.
Improvements in Patient Safety
2010 - 2014

17% reduction in HACs

87,000 lives saved

2.1 million patient harms avoided

$19.8 billion in savings

Saving Lives and Saving Money: Hospital-Acquired Conditions Update Interim Data From National Efforts To Make Care Safer, 2010-2014

AHRQ’s FY 2017 discretionary request totals $363.7 million
Increase of $29.7 million from the FY 2016 enacted level
AHRQ’s total program level at the FY 2017 request is $469.7 million, an increase of $41.2 million from FY 2016
Total program level includes $106 million in mandatory funds from the Patient-Centered Outcomes Research Trust Fund, an increase of $11.5 million from the prior year
AHRQ Budget Activity

- July 14: House Appropriations Committee recommended $280.2 million in FY 2017, approximately $54 million less than in 2016

- June 7: Senate Subcommittee on Labor, Health, and Human Services recommended $324 million, which is a $10 million decrease from 2016

- Continuing Resolution through December 9, 2016; Current level reduced by 0.496 percent
  - AHRQ is providing only necessary and limited funding in order to provide for the continuation of projects and activities

- Likely to have new CR to carry through spring 2017
AHRQ Support for Investigator-Initiated and Targeted Research

• AHRQ supports investigator-initiated research across all Agency program areas
• AHRQ also supports grants from Patient-Centered Outcomes Research Trust Fund
• Total AHRQ grant funding (investigator-initiated and targeted research):
  ▶ FY 2017: $192.3 million*
  ▶ FY 2016: $189.6 million
  ▶ FY 2015: $200.6 million
  ▶ FY 2014: $148.8 million

*Assumes 2017 funding is consistent with 2016 through Continuing Resolution
### Successful Rates of Applications Reviewed

<table>
<thead>
<tr>
<th>Category</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overall</strong></td>
<td>28%</td>
</tr>
<tr>
<td>F32 Training</td>
<td>42%</td>
</tr>
<tr>
<td>Ks Training</td>
<td>40%</td>
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<tr>
<td>R01 Investigator-Initiated</td>
<td>33%</td>
</tr>
<tr>
<td>R03 Investigator-Initiated</td>
<td>28%</td>
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<tr>
<td>R13 Conference</td>
<td>55%</td>
</tr>
<tr>
<td>R18 Dissemination</td>
<td>15%</td>
</tr>
<tr>
<td>R21 Exploratory/Development</td>
<td>21%</td>
</tr>
<tr>
<td>R36 Dissertation</td>
<td>21%</td>
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</tbody>
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Moving Evidence to Frontlines

- Gap in the amount of funding relative to the size of the challenges
- Gap from evidence generation to practice implementation
  - Estimated at 17 years
  - Delays health benefits
  - Contributes to disparities
We Can’t Even Find Agreement Within Our Own Institutions!

Scientists Call for Screening Mammography Every Two Years for Most Women

UCSF Breast Cancer Expert Recommends Screening Guidelines Developed by U.S. Preventive Services Task Force

By Elizabeth Fernandez on February 03, 2014

Adoption of new guidelines recommending screening mammography every two years for women ages 50 to 74 would result in breast cancer screening that is equally effective, while saving the United States $4.3 billion a year in health care costs, according to a study led by UC San Francisco.

The study compares three possible mammography screening strategies with a model of current U.S. screening practices.
UCSF Department of Radiology & Biomedical Imaging

Mammogram

UCSF Breast Imaging performs 100 percent full-field digital mammography, a technology that has been proven to be of significant value in detecting additional cancers that were missed using older technologies. Annual screening mammography for women is recommended starting at age 40. For high-risk women (those with a strong family history of breast or ovarian cancer, for example), screening may need to start earlier.

For all mammogram appointments, a physician referral is required, and you can call our scheduling team to book your appointment.

For those who would like to schedule a screening mammogram at our newest site at 1725 Montgomery Street, please use our simple online form. Then our scheduler will contact you.
“Our health care system lags in its ability to adapt, affordably meet patients' needs, and consistently achieve better outcomes. But we have the know-how and technology to make substantial improvement on costs and quality.”

Mark D. Smith, M.D., M.B.A.
Former President and CEO
California HealthCare Foundation
“A learning healthcare system is one that is designed to generate and apply the best evidence for the collaborative healthcare choices of each patient and provider; to drive the process of discovery as a natural outgrowth of patient care; and to ensure innovation, quality, safety, and value in health care.”

Why Now?

• Health care practice is rapidly consolidating
  ➢ Large systems becoming more prevalent
  ➢ Potential to efficiently generate new knowledge

• Emergence of EHRs
  ➢ Growing in availability and power to support effort

• Payment changes require population management
Percentage of Physicians in a Health System: 2013

Overall: 34%

AHRQ analysis of SK&A data

- >46%
- 45%-36%
- 36%-32%
- 31%-28%
- <28%
EvGen: The Vision

- A national system for evidence generation ("EvGen")
- As health care data become increasingly digitized, we should be able to do research faster, better, and more cheaply
- Can also transfer knowledge from research more efficiently
- Could fuel evidence-based care

The goal: to **systematize** the collection, analysis, and practical application of data
Translating Evidence Into Practice

- Need feedback loop to harvest the value of investments in generating new knowledge
- Payment incentives creating organizational interest in more systematic approaches to adopting and applying evidence
- Health systems have varying internal capacity and need additional support
AHRQ LHS strategy: Co-Create

• Characterize all health systems
  ▶ Capabilities to generate, adopt, and apply evidence
• Promote data analytics to support population management
• Make evidence available through clinical decision support
• Support adoption of evidence into the workflow of care
• Embed research training at the interface of clinical operations
• Monitor progress on rate of moving evidence into practice
Learn from Health Care Systems

- Compendium of all U.S. health systems
- Identification of factors impacting delivery system performance
  - What is the structure and organization of workforce, IT, and other resources?
  - How do health systems engage in the generation of evidence?
  - How do health systems adopt/apply evidence?
  - How does the adoption of evidence impact outcomes such as quality and value?
Data Analytic Tools

Clinical Data

• Generate new knowledge about prevention, treatment and delivery models

• Timely determination of the relevance of new research evidence to your patient population

• Evaluate variation in how knowledge applied to patients in your health system

Improve care for patients
Clinical Decision Support (CDS) Learning Network

- Accelerate collaborative learning opportunities
- Identify barriers and facilitators to incorporating evidence related to patient-centered outcomes research in CDS
- Monitor use of patient-centered outcomes research evidence in vendor-based and open source CDS tools

www.pcorcds-ln.org
Integrating Data Analytics and Decision Support Into the Workflow
Building Capacity to Apply Evidence

**Evidence Now**
- Tied to Million Hearts campaign
- Coaching >2,000 small/medium-sized primary care practices
- Systems approach to applying evidence about management of CV risk factors

**Rural Opioid Abuse Disorder**
- Testing ability of tele-health to overcome knowledge, workforce shortages to provide MAT
- MAT training, behavioral health support
- Builds on investment in Project ECHO
Engaging Research, IT and Health Systems

- Partnered with AcademyHealth since 2010
- Promoting collaboration among researchers, clinical operations, clinical informatics and others to shape learning health systems
- eGEMS, Communities of Practice, and annual Concordium

www.edm-forum.org/home
Training A New Type of Health Services Researcher

• **Initiative**: To construct a set of core competencies to guide the development of training programs for learning health systems researchers

• **Proposal**: To embed trainees at the interface of research, informatics and clinical operations within PCORnet and other learning health systems
Monitoring Our Progress

• Evaluate the effectiveness of our strategies to disseminate and implement evidence

• Develop a standardized way to monitor the rate at which evidence moves into practice over time

• Assess whether evidence-based practice improves outcomes
Your Role

• Develop and use methods to systematically integrate evidence into clinical care
  ▶ Generate evidence from your practice
  ▶ Rapidly adopt evidence into your practice
  ▶ Ensure that evidence is applied in a consistent way within your organization

• Utilize our grant mechanisms to help you build a learning health system
AHRQ Grant Mechanisms and Continuum of Research

**Training/Career Development**
- **K08, K01, K02** – Research Career Dev. and Mentorship
- **R36** – Health Services Research Dissertations

**Health Services Research**
- **R03** – Small Research Grants
- **R01** – Large Research Grants
- **R18** – Large Demonstration/Dissemination Grants

**Conferences**
- **R13** – Conference Grants
Thank you!

Your questions?