Moving from Best Evidence to Practice: The Role of Patient-Centered Outcomes Research

Carolyn M. Clancy, MD
Director

Agency for Healthcare Research and Quality

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Patient-Centered Outcomes

“The core point at which health care costs explode is the point at which the doctor and the patient sit down together to make a decision about what they should do. We have not concentrated enough, in our thinking about reform, on that moment.”

Atul Gawande
Time magazine
January 4, 2010
Components of Personalized Medicine

- Patient-Centered Outcomes Research
- Genomics and Other Biological Factors
- Patient Preferences
- Availability of Targeted Therapies and capacity to accelerate delivery to all who can benefit

The Key Question: Which components add value to the goal of system transformation?
Current Challenges

- Balancing investments in research versus implementation
- Improving the science of measurement
  - Surveillance versus “rifle shots”
  - Practical and cost-effective
- Creating a level playing field among all stakeholders, including patients and consumers
Moving from Best Evidence to Practice

- AHRQ and Patient-Centered Outcomes Research
- Recent Legislation
- Applying the Science to Practice
AHRQ Priorities

**Patient Safety**
- Health IT
- Patient Safety Organizations
- New Patient Safety Grants

**Effective Health Care Program**
- Comparative Effectiveness Reviews
- Comparative Effectiveness Research
- Clear Findings for Multiple Audiences

**Ambulatory Patient Safety**
- Safety & Quality Measures, Drug Management and Patient-Centered Care
- Patient Safety Improvement Corps

**Medical Expenditure Panel Surveys**
- Visit-Level Information on Medical Expenditures
- Annual Quality & Disparities Reports

**Other Research & Dissemination Activities**
- Quality & Cost-Effectiveness, e.g. Prevention and Pharmaceutical Outcomes
- U.S. Preventive Services Task Force
- MRSA/HAI
AHRQ-Funded Projects

- University of Washington Medical Center Safe Surgery Project
  - Checklist-guided initiative based on World Health Organization’s Safe Surgery Saves Lives pilot
  - Washington State Hospital Association says 100 percent of state hospitals have since either implemented a standardized surgical checklist or are in the process of doing so

- Santa Cruz County Diabetes Registry
  - Provides patient histories
  - Tracks the diabetes population to identify trends in key indicators of care

- Computerized Clinical Decision Support System and EHR-linked Registry for Management of Hypertension
  - Computerized disease registry
  - Seeks to generate more empirical data on effective information technology strategies among low-income immigrant populations
Federated network of electronic health data from 9 physician organizations (more than 500 clinicians and 400,000 patients)

Objectives of pilot study:
- Create DARTNet and validate data and system integrity
- Evaluate comparative effectiveness, safety and utilization of oral hypoglycemics

Assess factors affecting scale up (size and complexity) and sustainability of DARTNet
Developing the architecture for a multipurpose, multi-institutional distributed health data network

Intended to support secure data analyses on data that remains in the possession of the original data holder

Research study involves three large, integrated health care delivery systems that collectively care for more than 4 million people

- Assessing the comparative effectiveness of two commonly used second-line anti-hypertensive agents: angiotensin-converting enzyme (ACE) inhibitors and beta-blockers
AHRQ’s Effective Health Care Program

- AHRQ’s Effective Health Care Program created by Medicare Modernization Act of 2003
- From 2005-2009, AHRQ received $129 million from Congress for patient-centered outcomes research
- Program has published more than 50 products, including guides for clinicians and consumers
- The American Recovery and Reinvestment Act of 2009 included $1.1 billion for patient-centered outcomes research, including $300 million to AHRQ:

http://www.recovery.gov
Sample Effectiveness Review: Rotator Cuff Tears

Executive Summary

- Assesses the full range of treatment options, includes a broad range of study designs, considering only studies that confirmed the presence of rotator cuff tears

- Data Source: 12 electronic databases (1990 to September 2009)

- Data Synthesis: 5,677 citations and 137 studies were included in the review

www.effectivehealthcare.ahrq.gov
Rotator Cuff Tears: Key Questions, Systematic Review

- Early surgical repair versus late surgical repair
- Comparative effectiveness of operative approaches and post-operative rehabilitation
- Comparative effectiveness of nonoperative interventions
- Associated risks, adverse effects and potential harms of nonoperative and operative therapies
- Demographic and clinical predictive factors
Information on specific interventions is limited, so there are no firm conclusions for a single approach or the optimal management of this condition.

Overall, the evidence shows that all interventions result in substantial improvements, with few differences of clinical importance.

The benefit of receiving treatment appears to outweigh the risk of associated harms.

Future research should include studies that compare the effectiveness of early versus delayed surgery; the relative effectiveness of operative versus nonoperative surgery; and consensus on clinically important and patient-important outcomes.

Effective Health Care Program

- Funds researchers, research centers and academic organizations to produce effectiveness and patient-centered outcomes research
- Produces research reviews, original research reports, summary guides
- Tailors research findings for clinicians, policymakers and consumers

Effective Health Care

Choosing Antidepressants for Adults

Clinician’s Guide

Clinical Issue

More than 46 percent of Americans will be affected by major depression at least once during their lifetime.

Pharmacotherapy is a primary treatment strategy for depression, but almost 40 percent of people will not respond to the first antidepressant they take. Medication side effects are common. More than 60 percent of people on antidepressants will experience at least one.

Owing to the substantial mortality drawback and the high incidence of side effects, many people need to try several different antidepressants before finding one that works for them and that they can tolerate. The success of any antidepressant choice will ultimately depend on a balance of depression relief, side effects, and cost.

Clinical Bottom Line

- All the antidepressants in this guide are effective for treating the acute phase of major depression in adults, including those 65 and older.
- Response rates vary widely but are similar after a sufficient period of treatment with atypical, tricyclic, selective serotonin reuptake inhibitors, and serotonin–norepinephrine reuptake inhibitors.

CONFIDENCE SCALE

- The confidence ratings in this guide are derived from a systematic review of the literature. The highest confidence level is based on the smallest number of studies with high methodological quality.
- The findings are generalizable to other patient populations and medical conditions.

SOURCE: The source material for this guide is a systematic review of relevant research studies. The findings here are consistent with data on antidepressant effectiveness in the Psychopharmacologic Treatment of Major Depressive Disorder study, a trial conducted at the University of California, San Diego and the University of North Carolina at Chapel Hill. The trial included over 10,000 participants with major depression and was funded by the National Institute of Mental Health. The findings were subsequently published in the American Journal of Psychiatry.

EHC Clinician’s Guide

August 2017
Consumer Reviews

Summarize research review findings on the benefits and harms of different treatment options. Provide useful background on health conditions. Medication guides contain basic wholesale price information.

Several consumer guides are also available in Spanish.
New Recovery Act Awards

$473 million* in awards for patient-centered outcomes research announced September 30th to support patient-centered outcomes research in areas including:

- health care interventions in real world settings
- advanced use of the research findings by diverse populations
- development of effective patient registries and training
- career development for the next generation of researchers

*Covers all of AHRQ’s $300 million allocation and $173 million of the $400 million administered by AHRQ for the HHS Secretary
Investments

Data Infrastructure
- Enhance Availability and Use of Medicare Data to Support Comparative Effectiveness Research
- Distributed Data Research Networks, Including Linking Data

Dissemination and Translation
- Dissemination of CER to Physicians, Other Providers, Patients and Consumers Through Multiple Vehicles
- Accelerating Dissemination and Adoption of Patient-Centered Outcomes Research by Delivery Systems

Research
- Optimizing the Impact of Patient-Centered Outcomes Research Findings through Behavioral Economic RCT Experiments
- Patient-Centered Outcomes Research on Delivery Systems
Translating the Science into Real-World Applications

- **Recovery Act Evidence Generation Projects**
  - **Clinical and Health Outcomes Initiative in Comparative Effectiveness (CHOICE):** First coordinated national effort to establish a series of pragmatic patient-centered outcomes research studies
  - **Request for Registries:** Creation or enhancement of national patient registries, primary focus on the 14 priority conditions
  - **DEcIDE Consortium Support:** Expansion of multi-center research system, funding for distributed data network models that use clinically rich data from electronic health records
  - **Prospective Outcome Systems using Patient-specific Electronic data to Compare Tests and therapies (PROSPECT):** Enhanced capabilities for the systematic collection of prospective data
AHRQ has a history of applying the science to practice

- Health IT (CDS)
- Shared Decision Making
- Encouraging the inclusion of all possible populations in clinical trials
- Funding studies about the benefits and harms among different patient subgroups
"It is apparent that there is growing demand for the collection of patient-reported outcome measures."
Patient Protection and Affordable Care Act of 2010

- Builds on infrastructure and initiatives in the Recovery Act
- New opportunities for quality improvement
- New opportunities for patient-centered research

http://healthreform.gov
Important Provisions

- National Strategy to Improve Health Care Quality
- Interagency Working Group on Health Care Quality
- Quality Measure Development
- Data, Collection, Analysis and Public Reporting
- Health Care Quality Improvement (CQuIPS)
- Patient-Centered Outcomes Research Institute
Patient-Centered Outcomes Research Institute

- Established by the Patient Protection and Affordable Care Act, Section 6301
- Independent, nonprofit Institute with public- and private-sector funding
- Sets priorities and coordinates with existing agencies that support CER
- Prohibits findings to be construed as mandates on practice guidelines or coverage decisions and contains patient safeguards
Guiding principles:

- Person-centeredness and family engagement will guide strategies, goals and improvement efforts.
- Strategy and goals to address all ages, populations, service locations, sources of coverage.
- Eliminating disparities in care integral to all goals and strategies.
- Design/implementation seeks to align public and private efforts.
### National Strategy for Quality: Three Pillars

1) **Better Care** *(Responding to the sick and acutely ill)*
   - Person-centered
   - Addresses the quality, safety, access, and reliability of care delivery
   - Renders the best possible care at all stages of health and disease

2) **Affordable Care** *(Better journeys, integrating care)*
   - Reins in unsustainable costs for families, government and the private sector

3) **Healthy People/Healthy Communities** *(Addressing upstream causes)*
   - Promotes health and wellness at all levels through strong partnerships between health care providers, individuals, and community resources
Multiple factors can cause disease
- Lifestyle
- Environment
- Genetics

There are many treatments can lead to positive behavior change
- Counseling to Change Behavior
- Devices
- Drugs
Opportunities

- Expand interdisciplinary research to include factors, such as:
  - Real-world Settings and Populations
  - Different Comorbidities
- Improve lifestyle choices, such as:
  - Quitting Smoking
  - Improved Diet and Exercise
- Increase the range of research on health care delivery:
  - Health IT
  - Dissemination and Use
Thank You

AHRQ Mission

To improve the quality, safety, efficiency, and effectiveness of health care for all Americans

AHRQ Vision

As a result of AHRQ's efforts, American health care will provide services of the highest quality, with the best possible outcomes, at the lowest cost

www.ahrq.gov