

Improving Quality and Reducing Cost: A Research Agenda for Change

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What Is Quality?



The Right Care



For The Right Patient



At The Right Time



A Quality Disconnect

Health care costs up 8% per year

Health care quality up 1.8% in 2008

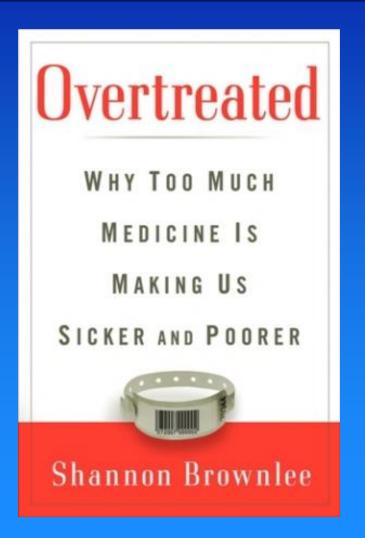


Challenges and Opportunities

- Health spending is about \$2.3 trillion per year; of that, it is estimated that \$700 billion is spent on unnecessary care
- Large regional variation in clinical care and cost
- Pervasive quality, safety, and equity issues
- Translating scientific advances into actual clinical practice and usable information for clinicians and patients



Cost Containment



"We spend between one fifth and one third of our health care dollars... between five and seven hundred billion dollars (that's billion, with a b) on care that does nothing to improve our health."

Brownlee S. Overtreated: Why Too Much Medicine is Making Us Sicker and Poorer. New York: Bloomsbury; 2007.



AHRQ Study: Surgical Errors Costly After Hospital Discharge

- Surgical errors cost nearly \$1.5 billion annually
- One of every 10 patients who died within 90 days of surgery did so because of a preventable error
- One-third of the deaths occurred after the initial hospital discharge





Improving Quality and Reducing Cost



- AHRQ's Role
- Comparative Effectiveness
- Health IT
- UQ&A



AHRQ Priorities

Ambulatory Patient Safety

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

Medical Expenditure Panel Surveys

- Medical Expenditures
- > Annual Quality & Disparities Reports

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

Other Research & **Dissemination Activities**

- Visit-Level Information on Quality & Cost-Effectiveness, e.g. Prevention and Pharmaceutical Outcomes
 - U.S. Preventive Services Task Force
 - MRSA/HAIs



AHRQ's National Reports on Quality and Disparities

Reports published May 2009

- The median annual rate of change for core quality measures was 1.8%
 - Of 190 measures, 132 (69%)
 showed some improvement
- Some reductions in disparities of care according to race, ethnicity, and income
 - Disparities persist in health care quality and access





NHQR on Rehospitalization

- Data from 9 States on rehospitalization for CHF
- Rehospitalization signals a worsened state of illness and is more resource intensive than outpatient treatment.
- Good outpatient care and early intervention can help prevent rehospitalization.
- Mean CHF rehospitalization rate for all adult patients the sample was 210 per 1,000 in both 2004 and 2005
- Rehospitalizations ranged from a low of 120 to a high of 220 per 1,000 for rehospitalizations for CHF



Re-Engineered Hospital Discharge Program (RED)



Home

Development of the RED Components of the

💆 Toolkit

Recognitions

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Publications &

Abstracts
Meet Louise...
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Funding Links

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Project RED (Re-Engineered Discharge)

Project Re-Engineered Discharge is a series of Randomized Controlled Trials at Boston University Medical Center. Each phase of Project RED is aimed at improving patient safety by recreating the process by which patients leave the hospital. Participants in Project RED receive treatment at an urban hospital that tends to serve a low-income, ethnically diverse population. The Project RED intervention is founded on 11 discrete, mutually reinforcing components. A specially trained nurse called a Discharge Advocate introduces the intervention to the RED participant.

This project is supported by grants from the Agency for Healthcare Research and Quality (AHRQ) and the National Institutes of Health (NIH)-National Heart, Lung and Blood Institute (NHBLI). The contents of this website are solely the responsibility of Brian Jack, MD and Boston Medical Center and do not necessarily represent the official view of or imply endorsement by AHRQ, the U.S. Department of Health and Human Services, the NIH or NHBLI.

Technology and the Re Engineered Discharge PDF (366 KB)







- AHRQ-funded research program at Boston University Medical Center, Department of Family Medicine
 - RED patients had 30 percent fewer subsequent emergency visits and readmissions
 - RCT-tested, designed to educate patients about their post-hospital care plans
 - Ongoing research is testing the automation of discharge principles in RED



Improving Quality and Reducing Cost

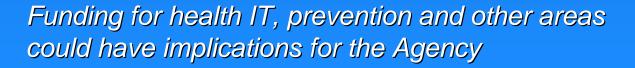


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Comparative Effectiveness and the Recovery Act

- The American Recovery and Reinvestment Act of 2009 includes \$1.1 billion for comparative effectiveness research:
 - AHRQ: \$300 million
 - NIH: \$400 million (appropriated to AHRQ and transferred to NIH)
 - Office of the Secretary: \$400 million (allocated at the Secretary's discretion)







Recovery Act Timeline: AHRQ





Other Aspects of Recovery Act

- Comparative Effectiveness Research conducted with funds appropriated under the Recovery Act "shall be consistent with Departmental policies relating to the inclusion of women and minorities."
- Congress does not intend for the research money to be used "to mandate coverage reimbursement or other policies for any public or private payer."
- Details about the types of research being funded or supported must be submitted to Congress every six months, beginning Nov. 1, 2009.



Federal Coordinating Council

- Established by the Office of the Secretary to offer guidance and coordination to achieve maximum use of the funding
 - Members include representatives from agencies involved in comparative effectiveness research
 - The Council will consider the needs of populations served by federal programs and opportunities to build and expand on current investments and priorities
 - The Council will not recommend clinical guidelines for payment, coverage or treatment



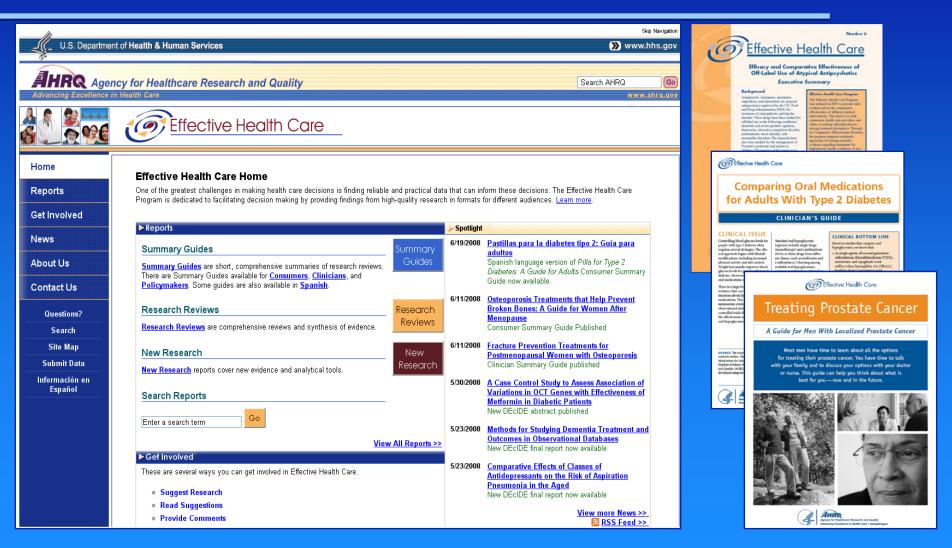
Federal Coordinating Council Members

- Anne Haddix, CDC
- Thomas Valuck, CMS
- Peter Delany, SAMHSA
- Carolyn Clancy, AHRQ
- Deborah Hopson, HRSA
- David Hunt, ONC
- James Scanlon, HHS
- Elizabeth Nabel, NIH

- Garth Graham, Office of Minority Health
- Jesse Goodman, FDA
- Michael Marge, Office on Disability
- Neera Tanden, HHS
- Joel Kupersmith, VA
- Michael Kilpatrick, DoD
- Ezekiel Emanuel, OMB



AHRQ Comparative Effectiveness Research





Effective Health Care Program

A. Evidence synthesis (EPC program)

- Systematically reviewing, synthesizing, comparing existing evidence on treatment effectiveness
- Identifying relevant knowledge gaps

B. Evidence generation (DEcIDE, CERTs)

- Development of new scientific knowledge to address knowledge gaps.
- Accelerate practical studies

C. Evidence communication/translation (Eisenberg Center)

- Translate evidence into improvements
- Communication of scientific information in plain language to policymakers, patients, and providers



CERTs Centers

Brigham and Women's Hospital	Health IT
Children's Hospital - Cincinnati	Pediatric care
Duke University Medical Center	Therapies for heart and blood vessel disorders
HMO Research Network	Multiple population-based delivery systems
Houston Area CERT	Consumer education and patient adherence
KP Ctr for Health Research, Portland	Coordinating Center
Rutgers University	Mental health therapeutics
University of Alabama - Birmingham	Musculoskeletal disorders
University of Arizona & C-Path	Drug interactions/Women's health
University of Chicago	Clinical/economic issues in hospital settings
University of Illinois - Chicago	Prescribing tools, including formularies
University of Iowa	Elderly and aging
University of Pennsylvania	Anti-infective use and resistance
Vanderbilt University	Therapeutic issues in Medicaid and VA system
Weill Medical College - Cornell	Therapeutic medical devices



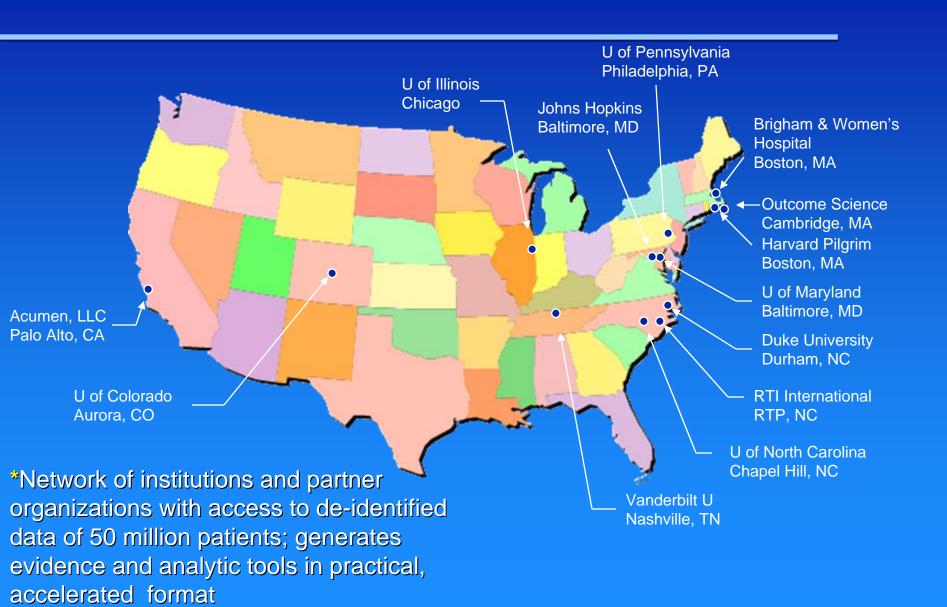
Evidence-Based Practice Centers

- Blue Cross and Blue Shield Association, Technology Evaluation Center (TEC), Chicago, IL
- Duke University, Durham, NC
- ECRI, Plymouth Meeting, PA
- Johns Hopkins University, Baltimore, MD
- McMaster University, Hamilton, Ontario
- Oregon Evidence-Based Practice Center
- RTI International-University of North Carolina at Chapel Hill, NC
- Southern California Evidence-based
 Practice Center-RAND, Santa Monica, CA
- Tufts University-New England Medical Center, Boston, MA
- University of Alberta
- University of Connecticut
- Minnesota Evidence-based Practice Center
- University of Ottawa
- Vanderbilt University

- Created in 1997; promotes evidencebased practice and decision-making
- Generate comparative effectiveness reviews on medications, devices and other interventions
- User-driven, with public and private-sector partners



DECIDE Research Network*





AHRQ Evidence Translation/ Communication (Eisenberg Center)

- Translates knowledge about effective health care into clear, actionable summaries to assess:
 - Treatments
 - Medications
 - Technologies
- Develops information summaries for 3 key audience groups:
 - Consumers
 - Health care providers
 - Policymakers





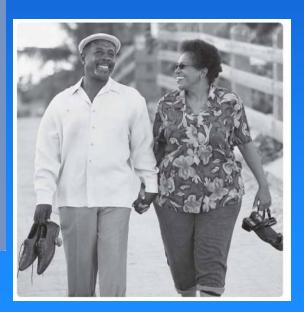
Plain Language Guides in English & Spanish

Fast Facts on Diabetes Pills

- Different kinds of diabetes pills work in different ways to control blood sugar (blood glucose).
- All the diabetes pills in this guide lower blood sugar.
- Combining two different kinds of diabetes pills can work better to lower your blood sugar than a single medicine.
- But combining two kinds of diabetes pills can make it more likely that your blood sugar will drop too low.
- Most diabetes pills can cause weight gain. One kind, metformin (Glucophage*), does not make you gain weight.
- Diabetes pills won't raise or lower your blood pressure enough to affect your health.

Hechos resumidos sobre las pastillas para la diabetes

- Diferentes tipos de pastillas para la diabetes funcionan de formas distintas para controlar el azúcar en la sangre (glucosa en la sangre).
- Todas las pastillas para la diabetes en esta guía bajan el azúcar en la sangre.
- El combinar dos tipos diferentes de pastillas para la diabetes puede funcionar mejor para bajarle el azúcar en la sangre que un medicamento individual.
- Pero el combinar dos tipos de pastillas para la diabetes puede aumentar la probabilidad de que el azúcar en la sangre se le baje demasiado.
- La mayoría de las pastillas para la diabetes pueden causar un aumento de peso.
 Una clase, la metformina (Glucophage®), no hace que aumente de peso.
- Las pastillas para la diabetes no le subirán o bajarán la presión arterial tanto como para afectar su salud.





Effective Health Care: Where the Rubber Meets the Road

- It is key to the important and often complex decisions that health policy makers, clinicians and patients need to make every day under extreme circumstances
- Credible evidence can be identified, analyzed objectively and effectively, shared widely and used to develop systems for more rapid learning
- Research topics parallel priorities of federal health leaders and the needs of the health care system



Improving Quality and Reducing Cost



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AHRQ Health IT Research Funding

- Long-term agency priority
- AHRQ has invested more than \$260 million in contracts and grants
- More than 150 communities, hospitals, providers, and health care systems in 48 states





AHRQ Health IT Initiative

AHRQ's Health IT portfolio includes:

- State and Regional **Demonstrations**
- Health IT Grants
- Privacy and Security Solutions for Interoperable Health Information Exchange
- **ASQ** Initiative
- **E-prescribing Pilots**
- **Clinical Decision Support Demonstrations**
- **Technical Assistance for Medicaid** and CHIP agencies



PROGRAM BRIEF **AHRQ's Ambulatory** Safety and Quality **Program: Health IT** Portfolio



Over the past 35 years, the Agency for Healthcare Research and Quality (AHRC)) and its predecessor agencies have made development of informatics an agency priority. In addition, AHRO-supported research has played a applicable. As the Nation's lead research agency on the quality, safety, efficiency, and effectiveness of health care in America, AHRO has a central role in the movement to adopt health IT.

AHRQ's Health IT Portfolio

AHRO's health IT initiative targets communities and regions as they plan and implement health IT projects. T initiative awarded its first grants and contracts in October 2004, and to date grants and contracts in 41 States to moort and stimulate investment in health IT. An important feature of or approach is that we use knowledge transfer from early adopters to new donters, technical assistance to tho

and strategies that work, so that each iteration does not repeat mistakes but builds on learning. Through these and other projects. AHRO and its partner adoption and use, solutions and best practices for making health IT work. d tools that will help hospitals and successfully. The following compris-AHRQ's current HIT portfolio

 State and Regional Demonstrations (2004-2010). Six States (CO, DE, IN, RI, TN, and over 5 years to identify and suppor State and regional data sharing and Interoperability activities and to demonstrate measurable improvements in care resulting from clinical data exchange. The demonstrations allow access to patient information at the point of care, connect systems of various local health care providers for better care coordination, and allow public and private health care providers to shan

ntial of health information nology (health IT) toward roving safety and quality in the substance care setting, especially in care transitions, forms the erstone of the ASQ Program. The hrough the following three funding >rtunity announcements (FOAs):

188 - clinical decision suppor

R - electronic dental recon S - electronic data system alth IT - health information

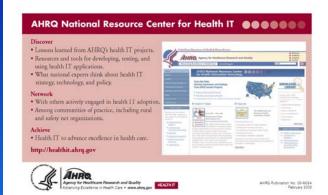
F - health information exclusion





AHRQ National Resource Center for Health IT

- Established in 2004.
- Central national source of information and assistance for advancing health IT goals.
- Maintains operation of the AHRQ health IT Web site.
- Direct technical assistance to AHRQ grantees.
- Repository for lessons learned from AHRQ's health IT initiative.





The AHRQ National Resource Center for **Health Information Technology**

of information and assistance to helo our Nation embrace the power and efficiency of health information technology (IT). Across the Nation, the need to harness the power of IT for our health care worem is clear. Technologies such as electronic health records, health information exchange, and telemedicine hold the potential to revolutionize everyday clinical care-making it better, safer, and more efficient.

In 2004, the Agency for Healthcare Rewards and Quality (AHRQ) established the National Resource Center for OATHOU exposures the Stational Resource Center for Health Information Technology to advance the goals of the Department of Health and Human Services' Secretary Mike Leavitt for modernizing health care through the best and most effective use of IT. AHBQ has invested more than \$166 million in grants and contracts in 41 States to support and stimulate investment in health IT, especially in rural and underserved areas. Together, these projects form a nationwide learning laboratory of health care systems, hospitals, physician practices, research institutes, nursing homes, and other organizations that are belying to transform clinical practice through health IT.

assistance and consulting services to AHRQ projects involved in developing, seeing, and using health IT applications, with a particular focus on addressing challenges to health IT implementation in rotal and small community settings. In doing so, the National Resource Center is helping to build the Nation's capacity across health case settings—large and small, urban and frontier-

In addition, the National Resource Center serves as the

IT. As the central propriety for lessons learned from AHRQ's health IT initiative, the National Resource Center will encourage adoption of health IT by disseminating the latest tools, best practices, and research results from this unique real-world laboratory. This knowledge library of new health IT findings and research will grow over time, serving as the hub for dissemination and translation of results from AHRQ-funded projects to the broader health care, public health, and health IT communities, and to the public at larve.

the University of Chicago, the National Resource Center comprises an extraordinary partnership of organizati with expertise in health IT, including the American Medical Informatics Association; BL Seamon and Associates: Burness Communications: the Center for Information Technology Leadership at Partners HealthCa System, Inc.; the Computer Sciences Corporation; the eHealth Initiative; First Consulting Group; Indiana University/Regenstrief Institute; Johns Hopkins University/Regenstrief the University of Massachusetts at Amberst; and the Vanderbilt Center for Better Health.

By providing direct technical assistance to AHRQ's health IT projects and supporting effective dissemination of lessons learned, the National Besource Center maximizes the benefit of the Agency's investment in health IT for health care providers, payers, patients, and policymakers as all levels.

For information about AHRQ's health IT initiative, visit http://healthit.ahrq.gov. For more information about the AHRQ National Resource Center, email healthit@ahrq.gov



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Health IT Evidence Based Practice Center Report

- First synthesis of existing evidence on factors influencing the usefulness, usability, barriers and drivers to the use, and effectiveness of interactive consumer health IT applications
- The most frequent factor associated with increased use by patients was the perception of a health benefit
- Patients prefer systems tailored to them and applications that incorporate familiar devices

Evidence Report/Technology Assessment
Number 175

Barriers and Drivers of Health Information Technology Use for the Elderly, Chronically III, and Underserved



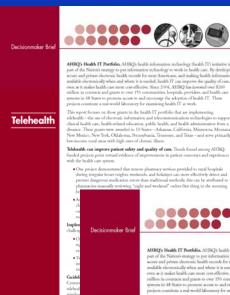






Decisionmaker Briefs

- Series of two-page reports on key outcomes and best practices from AHRQ health IT grantees
- All projects constitute a real-world laboratory for examining health IT
- Topics include CPOE and Chronic Disease Management





AHRQ's Health IT Portfolio, AHRQ's health information technology (health IT) initiative i part of the Nation's strategy to put information sechnology to work in health care. By developing secure and private electronic brailth records for most Americans, and making health information available electronically when and where it is needed, health IT can improve the quality of care, even as it makes health care more cost-effective. Since 2004, AHRQ has invested over \$200 million in contracts and guants to over 150 communities, hospitals, providers, and health care systems in 48 States to promote access to and encourage the adoption of health IT. These rojects constitute a real-world laboratory for examining health IT at work. This report focuses on those grants in the health IT portfolio that are impleme

New Mexico, New York, Oklahoma, Pennsylvania, Tennessee, and Texas—and serve primarily low-income rural areas with high rates of chronic illness. Telehealth can improve patient safety and quality of care. Trends found among AHRQlanded projects point toward evidence of improvements in patient outcomes and experience

during irregular hours (nights, weekends, and holidays) can more effectively detect and reswent dangerous medication errors than traditional methods; this can be attributed to

Bar-Coded Medication Administration AHRO's Health IT Portfolio. AHRO's health information technology (health IT) in part of the Nation's strategy to put information technology to work in health care. By developing secure and private electronic health records for most Americans, and making health information realiable electronically when and when it is needed, health IT can improve the quality of care even as it makes health care more cost-effective. Since 2004, AFIRQ has invested over \$260 million in contracts and grants to over 150 communities, hospitals, providers, and health can systems in 48 States to promote access to and encourage the adoption of health IT. These projects constitute a real-world laboratory for examining health IT at work.

Parient safety is a top priority for AHRQ, and Bar-coded medication admin (BCMA) holds promise for impacting the safety and efficiency of the medication administration process. This report focuses on findings from AHBQ health IT grantes that are implementing BCMA. AHBQ has funded grantees in 11 Sones (California, Georgia, Indiana, Michigan, Minnesota, Missouri, Ohio, Oregon, Utah, Vermont, and Wisconsin) including many in low-income and rural areas and areas with high percentages of patients enrolled in Medicare and Medicaid.

Medication errors pose a serious threat to patient safety. Each year in the United States nearly 7,000 deaths are linked to medication errors. These errors can occur at any stage in the process of medication use (x,y), prescribing, disposing, and alministration). The alministration pluse of medication use occurs when a health care professional gives medication(s) to a patient. BCMA uses an IT system for medication administration management (electronic medication administration occurd in conjunction with bur-coding expipment and software to avert medication administration errors. When health professionals administer medications to patients the IT system electronically records medication administration details such as parient, medication, dose, and timing information. Nurses and other caregivers use bar-coding conjunent and software to identify the patient and the medication and to verify that they are administering the right amount of the right drug to the right person at the right time.

BCMA can improve patient safety. Tiends among AHRQ-funded BCMA projects suggest that setients whose providen use BCMA technology may benefit from improved safety for medication administration.

- . Nones and more managers who were involved in implementing AHRO-funded BCMA Notices and more imagers who were involved in implementing, ACHIQ-bended NAMA efforts speet that the technology improved hospital addry practices inlated so medication dispensing and administration. Improvements were typically noticed several months after BCMA implementation, once the nurses had learned the system and integrand is time their workflow. Hospitals that invocated hearity in nurse training and workflow redesign saw safety improvements more quickly.
- Granters also describe improved accountability and monitoring of the medication administration process. Many BCMA systems have reporting capabilities that penuit analysis of when a medication was administered, who administered in, and whether medication information was scanned or manually entered into the system. Users indicate



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The "3T's" Road Map to Transforming U.S. Health Care



Key T1 activity to test what care works

Clinical efficacy research

Key T2 activities to test who benefits from promising care

Outcomes research
Comparative effectiveness
Research

Health services research

Key T3 activities to test how to deliver high-quality care reliably and in all settings

Measurement and accountability of health care quality and cost

Implementation of Interventions and health care system redesign

Scaling and spread of effective interventions

Research in above domains

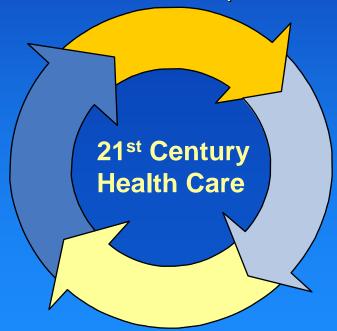


21st Century Health Care

Improving quality by promoting a culture of safety through Value-Driven Health Care

Information-rich, patientfocused enterprises

Evidence is continually refined as a by-product of care delivery



Information and evidence transform interactions from reactive to proactive (benefits and harms)

Actionable information available – to clinicians AND patients – "just in time"



Readmissions: Specific Challenges

- Easier to count than prevent
- Focus: urgent need to increase signal to noise ratio at the individual hospital level
- Incentives for shared accountability
- Focus on improvements in quality of life for patients**
- Clear need to identify subgroups as highest risk



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