

FACT SHEET

Focus on Cost-Effectiveness Analysis at the Agency for Healthcare Research and Quality

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AHRQ is the lead agency charged with supporting research designed to improve the quality of health care, reduce its cost, address patient safety and medical errors, and broaden access to essential services. AHRQ sponsors and conducts research that provides evidence-based information on health care outcomes; quality; and cost, use, and access.

The information helps health care decisionmakers—patients and clinicians, health system leaders, and policymakers—make more informed decisions and improve the quality of health care services.



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Background

Ongoing pressures to control health care spending have created a surge of interest in “cost-effective” health care. The relationship between the cost of health care and benefits to the public has come under scrutiny from the press. For example, in the July 29, 2001 *New York Times*, Michael Weinstein makes the case that use of some expensive new technologies may contribute to a rapid increase in health insurance premiums while providing little or no benefit to the patient. The central purpose of cost-effectiveness analysis (CEA) is to compare the costs and the values of different health care interventions in creating better health and longer life. Many new medical devices, procedures, diagnostic tests, and prescription drugs are expensive; cost-effectiveness analysis can help to evaluate whether the improvement in health care outcomes afforded by these interventions is an efficient way to spend health care dollars. This understanding of the costs and outcomes of comparative interventions is essential for public- and private-sector decisionmakers to make informed decisions about using health care resources efficiently.

The Agency for Healthcare Research and Quality (AHRQ) has been a leader in advancing the use and the science of cost-effectiveness analysis in health care. AHRQ has long supported extramural research that uses CEAs and advances the science of clinical economic evaluation. Clinical economics is the application of economics research methods to decisionmaking about clinical interventions, such as diagnostic tests or treatments. Since the publication of the classic book *Cost-Effectiveness in Health and Medicine* (Gold et al., 1996) laid out the definitive set of recommendations on performing CEAs, AHRQ has acted as a facilitator for other agencies within the Federal Government to develop and use CEAs to advance their own goals. For example, AHRQ, as a scientific partner to other sister agencies within the Public Health Service, has collaborated with Food and Drug Administration (FDA) staff in reviewing and evaluating the state of the science of cost-effectiveness analysis and the use of patient-reported outcomes to help the FDA better understand opportunities to use these methods in evaluating new drugs and devices. This collaboration allowed the



FDA to draft a set of guidelines for the use of cost-effectiveness analysis and patient-centered outcomes as part of the drug approval and promotional claims process (FDA, 1997; 1999).

The following summarizes and provides examples of the AHRQ Research Pipeline for cost-effectiveness in health care (AHCPR, 1999).

AHRQ's Research Pipeline

New knowledge on the use and science of cost-effectiveness analysis.

One of AHRQ's strategic goals is to provide special emphasis on clinical economics, including the conduct and support of research that promotes the use of CEA as a framework for decisionmaking. Since 1985, almost 10 percent of extramural research grants have included a clinical economic component, including 74 projects that have had an explicit cost-effectiveness analysis. Examples of CEA research that AHRQ has funded include:

- A cost-effectiveness analysis of lung volume reduction surgery in addition to medical management for treatment of patients with severe emphysema (PI: S. Ramsey, University of Washington). Severe emphysema is a life-threatening condition, which severely affects the patient's physical function and quality of life. The Centers for Medicare and Medicaid Services (CMS) and National Heart, Lung, and Blood Institute (NHLBI) are cosponsoring a trial to determine if lung volume reduction surgery is an effective therapy for improving survival and physical function. AHRQ is funding a parallel study to determine the cost-effectiveness of providing this surgery to those with severe emphysema.

- A cost-effectiveness analysis of different timing strategies for liver transplantation for end-stage liver disease (PI: M. Roberts, University of Pittsburgh). End-stage liver disease is a problem of major proportion in the United States, and liver transplantation is an effective but expensive therapy for this condition. The aim of this proposal is to use CEA to better understand the costs, survival, and quality of life associated with strategies for liver transplantation at different times in the course of the disease. Using this methodology, the researchers will provide a better understanding of when to transplant to maximize health outcomes at reasonable cost to the health care system.
- Development of a simulation model of coronary heart disease for use in health policy (PI: M. Weinstein, Harvard University). Cardiovascular disease is the Nation's leading cause of death. In this study, the investigators created a comprehensive model of the development of and death from coronary heart disease in the United States. The investigators projected costs and health outcomes for prevention and treatment strategies for heart disease. Findings from this research project have resulted in prominent publications on the cost-effectiveness of therapies for treatment of high blood pressure, high cholesterol, and heart attacks.

Tools and talent to advance the use of cost-effectiveness analysis. AHRQ has supported the development of professional expertise and the methodologic tools necessary to facilitate the conduct and comparability of CEAs. Examples of AHRQ's work in this area include:

- Establishing the Research Initiative in Clinical Economics (“RICE”) at AHRQ. The RICE, directed by Joanna Siegel, Sc.D., is tasked with conducting, supporting, and facilitating the production of knowledge that informs the efficient allocation of health care resources. Priorities for this initiative include developing tools to facilitate the conduct and comparability of CEAs, supporting research that promotes CEA use as a framework for decisionmaking, promoting the quality and credibility of CEA research, and advancing the science of CEA methods.
- Conducting the Medical Expenditure Panel Survey (MEPS) Quality of Life Survey. Health care interventions not only have impact on survival, but also on health-related quality of life; so CEAs must be able to account for quality of life in analyses of health care interventions, in addition to accounting for mortality and cost. The AHRQ-conducted MEPS Quality of Life Survey asks a nationally representative sample of the U.S. population about their health and how their health impacts on their quality of life. Results from this survey will be used to enhance the methods of accounting for quality of life in CEAs by providing a consistently measured set of quality of life adjustment factors, which will improve the comparability of CEAs using these measures.
- Understanding the cost-effectiveness of prevention. Disease prevention represents an area in which the impact of costs and health outcomes is especially important. AHRQ has participated in a recent project in

collaboration with the Centers for Disease Control and Prevention (CDC) that summarized the cost-effectiveness and overall impact of over 30 preventive services (Coffield et al., 2001) recommended by the AHRQ-supported US Preventive Services Task Force (USPSTF). In addition, AHRQ has provided support to the USPSTF to develop an approach to reviewing CEAs of preventive interventions and incorporating the findings into preventive care decisionmaking (Saha et al., 2001).

Translation of CEA research into

practice. A priority area for AHRQ is to facilitate the translation of research findings into practice. The Agency has an active interest in the use of cost-effectiveness analyses in decisionmaking at all levels of the health care system and how such analyses can be applied to reducing the gap between what is known and what is done. Recently released Program Announcements (PAs) to elicit new research include:

- *Impact of Payment and Organization on Cost, Quality, and Equity.* Research performed under this PA will provide a rigorous evidence base for policymakers and health systems managers who need to improve health care delivery through understanding the impact of methods of health care organization and financing systems on costs of care, quality of care, and patient outcomes.
- *Patient-Centered Care: Customizing Care To Meet Patients’ Needs* Research performed under this PA is intended to support the redesign and evaluation of new care processes that lead to greater patient empowerment, improved patient-





provider interaction, easier navigation through health care systems, and improved access, quality, and outcomes. This PA encourages researchers to examine how innovative approaches to care, chronic illness management, shared clinician-patient decisionmaking, and patient-clinician communication can improve patient outcomes at reasonable costs.

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