

# DEPARTMENT OF HEALTH AND HUMAN SERVICES



FISCAL YEAR  
**2003**

**Agency for Healthcare  
Research and Quality**

*Justification of  
Estimates for  
Appropriations Committees*

## Organization of the Document

The following is a brief description of the organization and purpose of the components of the FY 2003 Congressional Justification for the Agency for Healthcare Research and Quality (AHRQ).

The structure is based on AHRQ's three budget activities: Research on Health Care Costs, Quality and Outcomes; the Medical Expenditure Panel Survey; and Program Support.

### Overview [Pages 5 - 13]

This section describes AHRQ's mission and includes a short summary of the FY 2003 request, including the Secretary's Initiative to Improve Patient Safety, and information on how AHRQ's research helps people.

### Research on Health Care Costs, Quality and Outcomes [Pages 14 - 60]

This section serves two purposes:

- \$ The first component, entitled "Purpose and Method of Operation," describes research already funded or about to be funded in fiscal years 2001 and 2002. The structure of this section is based on the three goals in AHRQ's strategic plan, with special sections added to describe our commitment to improving health for priority populations and to discuss dissemination and training activities that support all three strategic plan goals.
- \$ The second component, entitled "Rationale for FY 2003 Request," describes research that AHRQ plans to fund at the FY 2003 request level.

### Medical Expenditure Panel Survey (MEPS) [Pages 61– 67]

This section serves two purposes:

- \$ The first component, entitled "Purpose and Method of Operation," provides some background information and describes MEPS activities in fiscal years 2001 and 2002. It also includes an outline of the surveys that comprise the total MEPS.
- \$ The second component, entitled "Rationale for FY 2003 Request," describes activities that AHRQ plans to support at the FY 2003 Request level.

### Program Support [Page 68]

This section also includes two components, "Purpose and Method of Operation," which describes support activities in fiscal years 2001 and 2002, and "FY 2003 Budget Policy," which describes activities that AHRQ plans to carry out at the FY 2003 request level.

### Tabular Information [Pages 69 - 98]

Standardized tables are included containing financial and legislative information.

### Government Performance and Results Act (GPRA)

## Overview of the FY 2003 Request

The Agency's mission is to improve the outcomes and quality of health care, reduce its costs, address patient safety, and broaden access to effective services, through the establishment of a broad base of scientific research and through the promotion of improvements in clinical and health system practices, including the prevention of diseases and other health conditions.

The Agency promotes health care quality improvement by conducting and supporting health services research that develops and presents scientific evidence regarding all aspects of health care. Health services research addresses issues of "organization, delivery, financing, utilization, patient and provider behavior, quality, outcomes, effectiveness and cost. It evaluates both clinical services and the system in which these services are provided. It provides information about the cost of care, as well as its effectiveness, outcomes, efficiency, and quality. It includes studies of the structure, process, and effects of health services for individuals and populations. It addresses both basic and applied research questions, including fundamental aspects of both individual and system behavior and the application of interventions in practice settings."<sup>1</sup>

To fulfill this mission, AHRQ supports and conducts research that is driven by the needs of users at three levels of the health care system: policy decisionmakers at the Federal and State level; systems decisionmakers in hospital, health plans, and provider organizations; and patients and their families. There are three overarching goals that the Agency uses to frame its activities:

1. Support Improvements in Health Outcomes
2. Strengthen Quality Measurement and Improvement
3. Identify Strategies to Improve Access, Foster Appropriate Use, and Reduce Unnecessary Expenditures

### **Summary of FY 2003 Request**

The FY 2003 request reflects a decrease of \$48,659,000 from the FY 2002 level, for a total of \$251,700,000. The request provides a \$5 million increase for the Secretary's Patient Safety Initiative, maintains funding for several priority programs, provides no new funds for non-patient safety research and training grants, and reflects a \$33,754,000 general reduction to grant and contract commitments.

Specifically, the request will provide funding for: translating research into practice grants; the Medical Expenditure Panel Survey (MEPS); the Healthcare Cost and Utilization Project (HCUP); the Consumer Assessment of Health Plans (CAHPS); grant and contract commitments related to the Secretarial Initiative on Patient Safety, plus \$5,000,000 in new funds for patient safety; and increases in research management, including costs related to consolidating AHRQ space. Within our total request, AHRQ will provide \$10,000,000 to the Department of Commerce to be used for the Current Population Survey. The request level will require reductions to some combination of research grant, research contract, and Inter-Agency Agreements.

The \$48,659,000 decrease is arrayed on the following page by AHRQ's budget activities: Research on Health Care Costs, Quality and Outcomes (HCQO), the Medical Expenditure Panel Survey (MEPS), and Program Support (PS). Details of the FY 2003 request, by budget activity, begin on page 52.

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<sup>1</sup> Eisenberg JM. Health Services Research in a Market-Oriented Health Care System. *Health Affairs*, Vol. 17, No. 1:98-108, 1998.

<b>Difference Between FY 2002 and FY 2003 Funding Levels for Selected Activities</b>	<b>HCQO</b>	<b>MEPS</b>	<b>Program Support</b>	<b>TOTAL</b>
Department of Commerce: Current Population Survey	+\$10,000,000	\$0	\$0	+\$10,000,000
Improving Patient Safety (Includes Contracts and Grants)	+\$5,000,000	\$0	\$0	+\$5,000,000
MEPS	\$0	+\$4,800,000	\$0	+\$4,800,000
Research Management	+\$4,400,000	\$0	\$100,000	+\$4,500,000
Accrued Retirement and Health Benefits Costs	+\$85,000	\$0	\$1,000	+\$86,000
Non-Patient Safety Research and Training Grants – Commitments	-\$27,113,000	\$0	\$0	-\$27,113,000
Non-Patient Safety Research and Training Grants – New	-\$39,291,000	\$0	\$0	-\$39,291,000
Non-Patient Safety Research Contracts	-\$6,641,000	\$0	\$0	-\$6,641,000
<b>TOTAL CHANGE</b>	<b>-\$53,560,000</b>	<b>+\$4,800,000</b>	<b>+\$101,000</b>	<b>-48,659,000</b>

### **Secretarial Initiatives**

The health care we receive today can be the most technologically sophisticated and of the highest quality in the world. However, the clinical care and organizational strategies known to be effective are not always the ones we are offered. As a result, sometimes patients fail to receive proven effective clinical preventive services that would prevent illness and disability. For example, failure to receive immunizations for influenza and pneumonia is reflected in preventable hospitalizations for serious respiratory illness and avoidable expenses. Similarly, inadequate management of asthma in children results in thousands of avoidable hospitalizations. Of concern is that some health care actually causes harm. A report in 1999 concluded that tens of thousands die each year from errors in their care -- so many that medical errors could be among the top 10 causes of death in the United States. While medical science and technology continue to provide promising advances, our health care system often struggles to keep up and deliver those advances to patients in the form of improved health care. Recognizing this, the Institute of Medicine gravely reported earlier this year that “(b)etween the health care we have and the care we could have lies not just a gap, but a chasm.”

As the Nation’s awareness of this chasm has increased, so too has support for AHRQ’s quality research agenda. This Report recognizes AHRQ as the Federal agency uniquely positioned to provide the evidence base to bridge the quality chasm: AHRQ’s core mission is to ensure that the knowledge gained through health care research is translated into measurable improvements in the health care system. AHRQ’s recent appropriations have enabled expansions in important areas of research, tool development and dissemination.

AHRQ requests \$5,000,000 of funding for activities that promote the translation of patient safety research into programs and products for health care systems with the goal of having measurable improvement in the safety of healthcare for Americans. The proposed budget activities will allow the Department to act immediately on what we know works in improving patient safety while building more knowledge for the future. These activities will be conducted in concert with other parts of the HHS, specifically the CDC, CMS, FDA, HRSA, IHS, and OASPE through the existing Patient Safety Task Force collaboration and the development of new coordinated activities. Through this coordination the Department will be able to develop synergy among the various OPDIV investments

in improving patient safety to ensure that the coordinated Departmental effort will produce a “whole which is greater than the sum of the parts.”

The activities at AHRQ will continue to build on and enhance the work begun in FY 2001, and which continue in FY 2002. The FY 2003 program has 2 components:

- Challenge Grants - \$3,000,000
- On-site Patient Safety Experts - \$2,000,000

To begin to streamline research across the Department, the Secretary has established the Research Coordination Council (RCC). This forum will evaluate research priorities across HHS to ensure that efficiencies are realized.

### **Information Technology**

AHRQ's request includes funding to support Departmental efforts to improve the HHS Information Technology Enterprise Infrastructure. The request includes funds to support an enterprise approach to investing in key information technology infrastructure such as security and network modernization. These investments will enable HHS programs to carry-out their missions more securely and at a lower cost. Agency funds will be combined with resources in the Information Technology Security and Innovation Fund to promote collaboration in planning and project management and to achieve common goals such as secure and reliable communication and lower costs for the purchase and maintenance of hardware and software.

### **Unified Financial Management System**

The Unified Financial Management System (UFMS) will be implemented to replace five legacy accounting systems currently used across the Operating Divisions. The UFMS will integrate the Department's financial management structure and provide HHS leaders with a more timely and coordinated view of critical financial management information, including more accurate assessments of the cost of HHS programs. It will also promote the consolidation of accounting operations and thereby reduce substantially the cost of providing accounting services throughout HHS. Similarly, UFMS, by generating timely, reliable and consistent financial information, will enable OPDIV Heads and program administrators to make more timely and informed decisions regarding their operations.

### **Absorption of the Costs of the Health Benefits of Commissioned Corp Annuitants Age 65 and Over**

For military retirees health benefits, current law requires agencies to be charged for the accruing cost for over-age 64 military retirees, and the budget proposes to extend this to under-age 65 military retirees in 2004. AHRQ will absorb these costs. The proposal does not increase or lower total budget outlays.

### **Accrued Retirement and Health Benefits**

The budget also requests an increase of \$86,000 in FY 2003 for accrued retirement and health benefits is associated with the proposed Managerial Flexibility Act of 2001. This legislation requires agencies, beginning in FY 2003, to pay the full Government share of the accruing cost of retirement for current CSRS, CIA and Foreign Service employees, and the Coast Guard, Public Health Service and NOAA Commissioned Corps. The legislation also requires agencies to pay the full accruing cost of post-retirement health benefits for current civilian employees. The intention of the legislation is to budget and present the full costs of Federal employees in the accounts and programs where they are employed. This legislation is part of an initiative to link budget and

management decisions to performance by showing the full cost of each year's program operations together with the output produced that year. These accrual costs are shown comparably in FY 2001 and FY 2002.

## How AHRQ's Research Helps People

AHRQ's mission, health care improvement through research, means that the work of research is not completed with the publication of findings in a research journal. While an important measure of the quality and productivity of the research enterprise, the number of publications found in the leading research journals cannot solely measure the full value of research. To be successful in fulfilling AHRQ's mission, research must be used to improve the day-to-day functioning of the US health care system. The results of research must be placed in the hands of those who can put it to practical use and produce even safer and more effective, and cost-effective health care.

Across the Nation, policymakers, consumers, patients and providers of care are making better-informed, cost-effective health care decisions and are receiving higher quality care thanks to AHRQ-supported research. The following are just a few examples of the health services research AHRQ has sponsored and how the results of that research have been put into practice by policymakers and those who make purchasing decisions, patients and consumers and providers of care.

### **POLICYMAKERS USE AHRQ RESEARCH IN VARIOUS WAYS**

In FY 2001, AHRQ responded to more than 2,500 requests for information from Federal, State and local government officials searching for evidence to inform their decisions. As a scientific research agency, AHRQ's role in responding to these requests is a simple one: to ensure that policymakers have the benefit of our existing knowledge and past experience so that they can make informed decisions. They should not be forced to "reinvent the wheel." AHRQ uses a number of approaches in responding to these requests: rigorous analyses of the scientific and medical literature, conducting and supporting short-term research on the impact of past policy interventions, at the Federal and State levels, undertaking simulations of the potential impacts of new policy options, and other forms of technical assistance. The following examples represent selected instances in which AHRQ research has been used by policymakers to improve the functioning of the entire US health care system.

***The Center for Medicare and Medicaid Services (CMS) revised its Medicare Coverage Issues Manual to include a national coverage policy permitting coverage for the treatment of actinic keratoses (AK), a common skin condition that is often the precursor of skin cancer. This coverage decision was based largely on the AHRQ Technology***

***Assessment for Actinic Keratoses Treatment.***

This assessment suggests that the presence

of AKs is associated with the development of squamous cell carcinoma (SCC) more than other

factors. SCC has the potential to metastasize and accounts for a large percentage of all non-melanoma skin cancer deaths in the Medicare population. Before the national coverage policy was issued, coverage decisions on whether to reimburse for AK removal were left up to local Medicare carriers. As a result, many carriers developed AK policies with varying degrees of restriction. The new national policy set by CMS supersedes any policies currently used by local carriers. In the last 2 years, AHRQ has nine technology assessments for the Coverage and Analysis Group at CMS; these technology assessments inform coverage decisions which are issued by CMS. CMS used three of these products to change coverage policy. Coverage decisions related to the

"This decision will enable all Medicare beneficiaries to get these lesions removed before they can develop into cancer. It makes sense for Medicare to provide uniform coverage nationally for proven treatments that prevent deadly disease."

Tommy Thompson  
Secretary, Health and Human  
Services

remaining six technology assessments are still pending in CMS. Furthermore, three additional technology assessments are currently under way.

***As a result of an AHRQ funded study, the State of North Carolina is providing free Vitamin D supplementation to breast fed infants across the State.*** Researchers at the Center for Education and Research on Therapeutics (CERTs) at the University of North Carolina (UNC) at Chapel Hill, and Wake Forest University School of Medicine, Winston-Salem, found that many exclusively breast-fed, dark-skinned infants would benefit from Vitamin D supplementation. All of the rickets cases among pediatric patients were African-American children who were breastfed and who had not had Vitamin D supplementation.

The study's findings caused an immediate change in North Carolina public health practice. The North Carolina Pediatric Society requested that the State of North Carolina distribute a multivitamin supplement free-of-charge to any exclusively breastfed infant or child, six weeks of age or older. Funding for the supplementation was provided through a Maternal and Child Health Block Grant and distributed through the Supplemental Nutrition Program for Women, Infants and Children. Over a 16-month period, more than 1,500 children received this supplementation at a cost of about \$1.50 per month, per child. Fact sheets were developed to help educate parents and health professionals about the need for vitamin D supplementation for the breastfed infant and child. The one-page informational sheets were printed in English and Spanish for parents and in English for health professionals.

***The Healthcare Association of New York State (HANYS) uses the AHRQ Quality Indicators (QIs) to assess the quality of care delivered by over 200 hospitals in New York State.*** A

number of programs have been implemented to improve healthcare quality based on these reports. For example a program was developed to expand awareness of the availability and effectiveness of immunization programs, after QI reports showed low rates of adult immunization for pneumonia and influenza. Similarly, when QI reports showed that certain areas of the **State** had high rates of admission for diabetes, a diabetes center of excellence was founded to improve the quality of care of patients with diabetes.

HANYS members describe their reactions to the reports that use the QIs:

*"The reports are great. They raise interesting issues for us and our physicians want their own copies."*

– a NY hospital COO

*"This is a wonderful tool! It has enabled me to engage physicians in a substantive discussion on developing a center of excellence."*

## **PATIENTS GET BETTER CARE BECAUSE OF AHRQ SPONSORED RESEARCH**

The pace of medical discovery and innovation has never been greater. But experience has repeatedly demonstrated that great opportunities for improving health, developed through biomedical research, are easily lost if physicians and patients are unable to make the best use of the knowledge in everyday care.

Failure to understand which services work best, under what circumstances, and for which types of patients contributes to the ever-increasing cost of care, low quality and ineffective care, threats to patient safety, and avoidable loss of lives. AHRQ's mandate is to close that gap by focusing on the effectiveness and cost-effectiveness of health care services and the organization, management, and financing of the health care systems through which those services are delivered. AHRQ research ultimately assures that patients and society reap the full rewards of basic research and biomedical innovation.



Because AHRQ's research addresses so many different aspects of the ways in which patients receive medical care, it may be easier to understand the broad scope and impact of AHRQ's research by looking at the role it plays when a patient needs care.

Rosa, who is 60 years old, goes to a hospital emergency room with chest pains. If Rosa is having a heart attack, her chances of recovery are better if she is treated immediately. All too often test results are inconclusive and precious time is lost while physicians await the results of further testing. But Rosa is fortunate. The hospital uses electrocardiograph which has special software developed by AHRQ research that predicts the likelihood that her chest pain is the result of a heart attack. It is. The software also predicts that her chances of dying or having a stroke could be reduced if the emergency room physicians administered "clot busting" drugs, known as thrombolytic drugs, immediately. They did.



Her physicians also receive a computerized reminder to prescribe a beta-blocker to relax the patient's heart and reduce her chance of a second heart attack. AHRQ supported research demonstrated that this life-saving medication is substantially under-used, and that computerized reminders can assure that the right patients are prescribed beta-blockers.



While Rosa is in the hospital, her beta-blocker prescription and other medications are monitored by a computer medication system designed to reduce the potential for prescribing errors and adverse drug events. This system was installed as a result of AHRQ research that found that the rate of medical errors in hospitals could be significantly reduced using computerized reminder and alert systems.

When she is released, she is given information on a home-based cardiac rehabilitation program, Heartlinks ([www.heartlinks.org](http://www.heartlinks.org)) that uses the Internet as the primary link between case manager, patient, and family member, developed by AHRQ.

***In addition, AHRQ sponsored research helps patients with chronic disease become active participants in their care and spend less time in the hospital.***

- ***A disease management program, developed with AHRQ support, has experienced widespread adoption and is now offered by organizations throughout the United States, as well as in China, England, New Zealand, Australia, Norway, and Sweden.*** The research project funded by AHRQ and the State of California demonstrated the benefit of chronic disease self-management in reducing hospitalization among people with multiple chronic conditions. This five-year research project developed and evaluated a community-based self-management program that assists people with chronic illness. More than 1,000 people with heart disease, lung disease, stroke or arthritis participated in the six-month trial and were followed for up to three years. Patients who completed this study showed significant improvement in exercise, cognitive symptom management, communication with their doctors, self-reported general health, health distress, fatigue, disability, and social/role activities limitations. In addition they spent fewer days in the hospital. The study, completed in 1996,

demonstrated that it is possible to successfully educate patients with different chronic diseases in the same intervention at the same time. The course content has also been published as a book, *Living a Healthy Life with Chronic Conditions*, and an audio relaxation tape, *Time for Healing*. ([www.stanford.edu/group/perc/cdsmp.html](http://www.stanford.edu/group/perc/cdsmp.html)). These results are also being used in the VA.

- **Let Me Decide** is a comprehensive advance directive that allows individuals and their families to specify a range of health care choices for life-threatening illnesses, cardiac arrest, and nutrition. The tool was developed by Dr. David Malloy of McMaster University, through a grant from AHRQ and was based on AHRQ funded research suggesting that systematic use of such a program could reduce use of health care services without affecting satisfaction or mortality. With more specific information than is sometimes found in generic advance directives, the **Let Me Decide** Advance Directive contains a personal statement, a definition of terms used in the document and a health care chart that allows specific decisions regarding levels of care preferences (palliative, limited, surgical and intensive) as well as what is desired in terms of feeding and cardiac arrest. In addition to the advanced directive, a complete educational package has been created by New Grange Press that consists of the booklet entitled, **Let Me Decide**, three videos, a set of slides, research papers, a cassette audio tape and **Let Me Decide** Advance Directives forms with instructions. The booklet is available in eight languages and the video is available in both French and English.

**Let Me Decide** "gives a better idea of what to do in different situations"

Barb Murphy, R.N.  
Maple Villa Long-Term Care

## AHRQ PROVIDES EVIDENCE-BASED INFORMATION FOR CONSUMERS, PROVIDERS AND PURCHASERS OF SERVICES

AHRQ, in conjunction with partnership with both public and private sector partners supports a variety of projects that help people make important choices about the health care they receive. For example:

- The Center for Medicare & Medicaid Services' very popular Web site, NursingHomeCompare, <http://www.medicare.gov/nhcompare/home.asp>, grew out of an AHRQ-funded project to develop a consumer information system to help people find data on nursing homes. The site provides detailed information about the performance of every Medicare and Medicaid certified nursing home in the country. The site was launched 2 years ago and has an average of 400,000 page views per month.
- The National Business Coalition for Health has adopted findings from several AHRQ products, including the July 2001 report on *Making Health Care Safer: A Critical Analysis of Patient Safety Practices*, and incorporated them into their 2002 NBCH request for information (RFI), a standard tool that affiliated employers use to solicit potential health plans with which to contract.
- The State of Washington's Health Care Authority is using a decision support tool originally developed through an AHRQ SBIR grant that incorporates CAHPS<sup>®</sup> (among other data) to help **State** employees and retirees choose among health plans. The tool was developed as *Health Plan Select*, but, as customized by Washington State, is called *Compare-A-Plan*. Beginning with the State's fall open enrollment period in late October 2001, *Compare-A-Plan* will be on the Washington State government's Web site. The tool is designed to be seamless with the existing Web site, providing information on the various plans offered (what each covers, how to go about choosing a plan), as well as providing enrollment forms.



## Research on Health Costs, Quality and Outcomes (HCQO)

	2001 Actual	2002 Appropriation	2003 Request	2003 Request +/- 2002 Appropriation
<b>Current Law</b>				
-- BA	\$102,255,000	\$0	\$0	\$0
-- PHS Eval	(\$124,130,000)	(\$247,645,000)	(\$194,000,000)	(-\$53,645,000)
<b>Accrual Costs</b>				
-- BA	\$1,230,000	\$0	\$0	\$0
-- PHS Eval	(\$282,000)	(\$1,526,000)	(\$1,611,000)	(+\$85,000)
<b>Proposed Law</b>				
-- BA	\$103,485,000	\$0	\$0	\$0
-- PHS Eval	(\$124,412,000)	(\$249,171,000)	(\$195,611,000)	(-\$53,560,000)
<b>FTE</b>	253	272	272	0

### **Purpose and Method of Operation**

The purpose of the Research on Health Care Costs, Quality and Outcomes (HCQO) activity is to support and conduct research that improves the outcomes, quality, cost, use and accessibility of health care. Accordingly, the Agency has identified three strategic plan goals that feed into this budget activity: (1) supporting improvements in health outcomes, (2) strengthening quality measurement and improvement, and (3) identifying strategies to improve access, foster appropriate use, and reduce unnecessary expenditures. The key themes throughout all three goals are to fund new research and to translate research into practice. Lastly, AHRQ has enhanced specific activities that support all of our strategic goals.

### **Accomplishments**

The Agency has made important strides toward meeting its strategic goals. Pages 16 through 54 review specific achievements in the Agency's core programs as well as activities initiated in response to the increase in the Agency's budget in FY 2002.

The first section, Support Improvements in Health Outcomes (pages 16 to 28), reviews the Agency's progress in specific research areas:

- ◆ Investigator-initiated research – centering health care around the patient
- ◆ Outcomes research
- ◆ Centers for Education and Research on Therapeutics (CERTs)
- ◆ Health of the Elderly
- ◆ Long-term Care
- ◆ Evidence-Based Practice Centers (EPCs)
- ◆ National Guideline Clearinghouse (NGC)
- ◆ Clinical preventive services
- ◆ Bioterrorism

The second section, Strengthen Quality Measurement and Improvement (pages 29 to 36), provides updates on activities in the following areas:

- ◆ Investigator-initiated research - Informing those who make health care decisions on ways to implement the lessons learned from research that informs their decisionmaking
- ◆ Measuring and improving the quality of health care
- ◆ Patient safety and reducing errors in medicine
- ◆ Progress toward a national report on quality
- ◆ Healthcare working conditions on the quality of care
- ◆ Help for patients and consumers of health care

The third section – Identify Strategies to Improve Access, Foster Appropriate Use, and Reduce Unnecessary Expenditures (pages 37 to 43) – encompasses critical sources of data and information for policymakers:

- ◆ Investigator-initiated research – impact of payment and organization on cost, quality and equity
- ◆ Research on health care markets and managed care
- ◆ Research grants related to cost, use and access
- ◆ HIV Research Network
- ◆ Healthcare Cost and Utilization Project (HCUP)
- ◆ Medical Expenditure Panel Survey (covered in detail beginning on page 61)

The fourth section, AHRQ's Commitment to Improved Health for Priority Populations (pages 44 to 49), outlines AHRQ's efforts and findings on the following issues:

- ◆ Minority health
- ◆ Children's health
- ◆ Women's health
- ◆ National Disparities Report

The final section, Activities that Support All Goals (pages 50 to 54), includes a discussion of our enhanced training and dissemination activities.

## **Support Improvements in Health Outcomes**

One of the most important priorities of AHRQ is to translate and disseminate the findings of research supported by the Agency into tools and information that can be used by its customers to make good health care decisions and to improve the outcomes of care. The research supported by AHRQ has historically concentrated on conditions that are common, costly, and for which there is substantial variation in practice. This research includes many of the conditions that represent major expenditures for Medicare and Medicaid. AHRQ's research attempts to reduce inappropriate variation and provide health care decisionmakers with information on what care is appropriate, which clinical services work best in what circumstances and for which patients, how much is enough, and what resources are used to provide it. Outcomes research also helps decisionmakers understand the implications of structural and financing changes in the health care system on the outcomes of care delivered in the system.

### **Investigator-initiated Research – Centering Health Care Around the Patient**

It is widely acknowledged that patients, more educated than ever about their health care, should be as active as they wish in decision-making regarding their care. For this to occur, both technical care and interpersonal interactions must be centered around the needs and preferences of individual patients — and research has shown that this approach yields better outcomes. As a result, health services research should be able to do more to identify and disseminate widely information about the factors that create an ideal environment for patient-centered care. As the recent Institute of Medicine (IOM) report, *Bridging the Quality Chasm*, stated, we must “modify the care to respond to the person, not the person to the care.”

In FY 2001 and 2002, AHRQ has requested applications that focus on the factors that create an ideal environment for patient-centered care. The focus of this PA, which was cosponsored by the National Institute of Mental Health, is on design and evaluation of care processes that empower patients, improve patient-provider interaction, help patients and clinicians navigate through complicated health care systems, and improve access, quality, and outcomes. Examples of relevant research topics include shared decisionmaking programs, electronic patient-provider communication, and patient self-management programs, particularly for chronic conditions.

### **Investigator-initiated Outcomes Research**

A majority of the existing outcomes research grants come from investigator-initiated research. Outcomes and effectiveness research seeks to understand the end results of particular health care practices and interventions. End results include effects that people experience and care about, such as change in the ability to function. In particular, for individuals with chronic conditions—where cure is not always possible—end results include quality of life as well as mortality. By linking the care people get to the outcomes they experience, outcomes research has become the key to developing better ways to monitor and improve the quality of care. Supporting improvements in health outcomes is a strategic goal of the Agency for Healthcare Research and Quality.

In FY 2001, AHRQ's outcomes research portfolio focused on a range of projects, including, comparative effectiveness of interventions for chronic conditions in adults (e.g. diabetes and chronic heart disease) and children (e.g., asthma and attention deficit hyperactivity disorder) improvements in research methodology, and research to reduce inappropriate racial disparities. In FY 2002, AHRQ called for additional studies on patient-centered care.

Recent accomplishments: AHRQ's prostate Patient Outcomes Research Team (PORT) findings have been used by the Memphis Veterans Administration Medical Center to develop a "Patient Pointer" on the pros and cons of prostate-specific antigen (PSA) testing. This one page, illustrated sheet was mailed to 15,000 veterans enrolled in its primary care clinics. Follow-up found that when the patients were properly informed about testing, there was substantially more appropriate use of PSA testing.

Several States have incorporated the recommendations of the schizophrenia PORT into their statewide treatment guidelines. The State of New York, in addition to establishing guidelines, has used the recommendations to develop quality indicators for their residency and rehabilitation programs as well as their clinics and hospitals. They also have developed automated pharmacy databases where the clinician's actual practices will be compared with the recommended regimes.

#### **Investigator-initiated Outcomes Research**

Maine Lumbar Spine Study, Maine Medical Assessment Foundation. This study is focused on the long-term outcomes of surgical and nonsurgical treatment of two common lumbar spine conditions: herniated intervertebral disc and degenerative spinal stenosis. The study will continue the followup of nearly 500 currently enrolled patients to 10 years from initial enrollment. For patients with disc herniation and sciatica, there will be a focus on work-related outcomes including disability compensation and work status. Analyses also will determine if surgical outcomes and nonsurgical treatment begin to merge as the only other long-term

**Research Finding.** Lower respiratory infection is one of the most common causes of death and hospitalization among nursing home residents. While hospitalization can be lifesaving for the sickest patients, for those who are less ill there is considerable risk of incurring avoidable expense and harm from needless hospitalization. Investigators from the University of Missouri studies nursing home residents with lower respiratory infection in 36 nursing homes, and developed a strategy to predict which patients are at highest risk of hospitalization and which could be more effectively treated in the nursing home. Their findings demonstrate that up to 52 percent of nursing home residents with lower respiratory infection are at low risk of mortality and may not require hospital admission. (Mehr D, Binder E, et al. Predicting mortality in nursing home residents with lower respiratory infection. The Missouri LRI

Seven States have implemented the recommendations or portions of them. By developing the recommendations, AHRQ has given the field the first comprehensive, evidence-based review of all treatments for schizophrenia. Building on our research, the National Institute of Mental Health is funding the current effort to update the recommendations so that their usefulness will continue, especially in light of the ever-changing field of psychopharmacology. It is reasonable to assume that more States and others will adopt the recommendations through time, exposure, and the effort to keep abreast of changing therapeutics.

## **Centers for Education and Research on Therapeutics (CERTs)**

Neither patients nor their caregivers should have to guess which therapies are the best or live in fear that a mistake will be made in treatment. This is the basis of AHRQ's Centers for Education and Research on Therapeutics (CERTs) program. AHRQ was given authority to support the CERTS initiative under the Food and Drug Modernization Act of 1997. Between 1999 and 2000, AHRQ established seven centers under the CERTS program, each of which focuses on therapies used in a particular population or therapeutic area. The CERTs conduct research and provide education that will advance the optimal use of drugs, medical devices, and biological products. In FY 2001 AHRQ supported these seven CERTs with an investment of approximately \$4.9 million.

### **Focus of the CERTs:**

- Duke University: Approved drugs and therapeutic devices in cardiovascular medicine.
- Georgetown University: Reduction of drug interactions, particularly in women.
- University of North Carolina: Rational use of therapeutics in pediatric populations.
- Vanderbilt University: Prescription medication use in the Medicaid managed care population.
- HMO Research Network: Use of large managed care databases to study prescribing patterns, dosing outcomes, and policy input.
- University of Pennsylvania: Antibiotic drug resistance, drug use, and intervention studies.
- University of Alabama: Therapeutics for musculoskeletal disorders.

While drugs, medical devices, and biological products improve health for thousands of people, side effects, misuse, and overuse of products can seriously impair the health of many others. Many patients potentially could benefit from a therapy but do not receive it; this may be through lack of information, oversight, or in the mistaken belief that the therapy will do them harm. In addition, studies may not test medical products in combination with other therapies often used by the same patients. Further, once approved, drugs and devices often are used for purposes other than those for which they were approved--sometimes these uses are supported by studies, but not always. Finally, some side effects of medical products emerge only after they have been approved for sale, when large numbers of people begin to use them.

The CERTs program aims to fill these information gaps by answering important questions that have not been addressed and strive

to develop educational interventions for current and future caregivers. Besides AHRQ, the participants in the CERTs include academic organizations, managed care organizations, drug and device companies, practitioners, commercial research groups, and consumer groups. The following are a few examples of how the CERTs seek to improve health through the best use of medical therapies.

**Pharmaceuticals Research Finding.** AHRQ's outcomes research program, including the Centers for Education and Research on Therapeutics, supports research to improve the safe and effective use of medications. In one such study researchers evaluated an intervention to educate clinicians on the use of acetaminophen, a safer alternative to non steroidal anti-inflammatory drugs (NSAIDs) in patients with osteoarthritis. This Intervention could potentially minimize side effects of these medications, such as internal bleeding. The investigators were able to show, that in nursing homes, they were able to significantly reduce usage. Further study is needed to determine the clinical significance of using such an intervention. Since 59 percent of Medicare beneficiaries report having arthritis, the potential impact of this intervention could be substantial.

**Why aren't patients with certain types of heart disease taking medicines that may save their lives?** Aspirin is inexpensive and available over-the-counter, and it greatly reduces the risk



of heart attack, stroke, and related death in people with coronary artery disease (CAD; blockage of the blood vessels that supply blood to the heart). Similarly, another class of drugs, beta-blockers, has been shown to help people with congestive heart failure (CHF). Data collected by the Duke University CERT confirmed that 13 percent of people with CAD were not taking aspirin, and 55 percent of people with CHF were not taking a beta-blocker. More importantly, the people with CAD who were not taking aspirin were almost twice as likely to die within 1 year as those who were.

The news was only slightly better for people with CHF who were not taking a beta-blocker; they had 1.5 times the risk of dying compared with people who were taking the medicine. The Duke CERT is now investigating ways to get the right life-saving medicines to the right people. Once more is understood about why people may not be taking these medicines, programs to overcome these barriers and save lives can be designed.

**Monitoring anti-HIV drug levels.** The ability of drugs to help women and children with HIV can be affected by the way they take the drugs and how their bodies handle the medicine. The University of North Carolina CERT developed a screening test to measure the levels of anti-HIV drugs called protease inhibitors in the bloodstream. The test will determine whether the level of drugs is too high or too low as a result of a problem in the way the drug was taken or absorbed.

Research involving the test had an unexpected, important finding: giving anti-HIV drugs to babies with water can speed the passage of the drugs through babies' systems before they have a chance to work. Giving drugs with infant formula greatly improves results. In another case, the test showed high levels of protease inhibitor in a child whose parent had readjusted the dose of the drug without telling anyone. Some patients were not getting their drugs at all. In one case, a child's mother was too ill herself to medicate her child, but only through the screening test could the problem be uncovered.

The test demonstrated that there might be a big difference between what a doctor prescribes and what is at work in the body. Providing this test to HIV-infected individuals can go a long way in ensuring that people are getting the level of drugs they need. The test also may help reduce the incidence of drug-resistant viruses and the cost of caring for patients with HIV.

**Rethinking antibiotics before dental treatment.** Many people are prescribed antibiotics before they go to the dentist in the belief that it will reduce the risk of endocarditis (infection of the heart lining and valves). Because conventional wisdom suggests that patients with heart problems are at risk, this preventive measure has been recommended for more than 45 years. The University of Pennsylvania CERT conducted a study to evaluate and quantify the risk of such infection. They found that the incidence of infection remained the same even after the introduction of widespread antibiotic prophylaxis, and that neither dental work in general, nor any individual procedures, were associated with infective endocarditis, with the possible exception of tooth extraction. The study also determined that flossing daily slightly reduced the risk of infection. Efforts are under way by the researchers to have these findings incorporated into American Heart Association guidelines.

**Rickets in North Carolina.** The Center at the University of North Carolina hypothesized that rickets might be on the rise in the North Carolina African-American population as an unintended consequence of breast-feeding in that population. Breast milk is generally deficient in Vitamin D, and living conditions may create a situation in which sun exposure, the body's way of manufacturing its own Vitamin D, is disrupted for African-American infants. In the initial work, researchers found 30 cases of nutritional rickets among pediatric patients of the two centers between 1990 and 1999, with over half of them presenting in 1998 and 1999. All of these cases were cases of African-American children who were breast fed and who had not had Vitamin D supplementation.

The investigators published these findings in the August 2000 *Journal of Pediatrics*, accompanied

by an editorial vigorously recommending that Vitamin D supplementation for breast fed children become a part of the standard of pediatric practice. The researchers shared both their findings and the results of the NC pediatricians study with the State of North Carolina. The State has taken swift action: it has already begun making free Vitamin D available to all breast fed children in the State, not just African American children. The vitamins are being distributed through the WIC program, and to date 744 children have already received their vitamins. We expect this work on rickets to result in a change in the American Academy of Pediatrics' standard of care for breast fed infants.

### **Health of the Elderly**

It is estimated that by the year 2020, 16 percent of the U.S. population will be age 65 or older. With the aging of America comes a greater need for information on how people can live healthier lives. In FY 2001, AHRQ's portfolio includes approximately 60 studies on aging, as well as research related to the health care conditions that, because of their severity or frequency, are the most costly to the Medicare program, including heart disease, pneumonia, and diabetes.

Recent accomplishment: A collaborative research study between AHRQ and CMS found that chronic conditions such as arthritis and urinary incontinence, often suboptimally managed in clinical practice, contribute significantly to poor physical function among women age 65 and older enrolled in Medicare+Choice. Low income and minority women had worse functional status, as a result of differences in chronic disease prevalence suggesting that improved management of these common chronic conditions can improve functional health outcomes, and prevent disability for all older women while making progress toward eliminating health disparities. Components of this work has been published in the Health Care Financing Review, Journal of the American Women's Medical Association, and Health Services Research, and it has been presented at national and international meetings. The Geriatric Measurement Advisory Panel of NCQA has developed a new quality indicator for Medicare+Choice plans for Urinary Incontinence, using the Medicare Health Outcomes Survey, and is exploring the feasibility of developing an indicator aimed at improving arthritis care. These findings will be shared with CMS's QIOs for their initiatives on disparities.

The results of a recent study at New York's Mount Sinai Hospital, published in the June 6, 2001 issue of the Journal of the American Medical Association, can help acute and post-acute care medical staff improve the outcomes of the approximately 350,000 hip fractures that occur annually in the United States by focusing efforts on reducing the risks that often leave patients unable to walk or lead to death from complications. Currently, four of every 10 patients are unable to walk without total assistance by six months after the fracture occurs and a quarter of patients die within a year. In addition to its human toll, hip fracture and its consequences have a large economic impact, with hospital charges alone totaling roughly \$6 billion a year. The challenge has been to identify characteristics that put patients at higher risk for these adverse outcomes.

AHRQ-funded researchers identified risk factors that accurately predicted the loss of locomotion and/or death. While previous studies have identified patient factors related to either the recovery of hip fracture patients or to death, most looked at function or mortality independently, and none reported on how risk-adjusted outcomes could be obtained to assess the effectiveness or quality of care in a hospital or post-acute care setting. Currently, each group involved in the care of a hip fracture patient tends to view only their small section of the overall condition. This means that aspects of care that need to be followed often slip through the cracks. The results of this study provide the evidence that close scrutiny and observation are critical to developing effective means of managing the care of hip fracture patients.

### **Long-term Care**

Long-term care is not just nursing home care. Rather, it is a continuum of services beginning with respite care for the caregiver and home health care. With the "graying" of the American population, the spread of AIDS, and the growing awareness of the needs of non-elderly disabled people, more long-term care and service options will be needed.

The U.S. long-term care system has developed in a piecemeal manner, resulting in inefficiency and problems with access, quality, and financing. Public funding of long-term care is directed heavily toward institutionalization, especially nursing home care, which accounts for about 12 percent of public health care spending. AHRQ's research also is directed toward assessing and projecting service use and costs, studying alternative care settings, and finding more cost-effective ways of improving the delivery and quality of long-term care.

Recent accomplishments: A major goal of AHRQ's long-term care agenda is to measure and improve quality and cost in all long-term care settings. The Agency is funding and conducting research as well as developing data to ensure the Department will be able to monitor change in quality and cost in all segments of the long-term care market, including the fastest growing segments: assisted living and sub-acute care. The Medical Expenditure Panel Survey is a valuable source of long-term care information from household data. Plans to increase the size of the disabled population will increase its importance. When the editing of the 1996 and 1997 data are complete, AHRQ staff and others will be able to study long-term care users and their caregivers. These data are unique in being able to study the expenditures and caregivers of non-elderly disabled persons. To enhance other long term care data, the agency is collaborating with the National Center for Health Statistics and the Assistant Secretary for Planning and Evaluation to develop a frame for residential long-term care facilities.

In prior years, about three-quarters of AHRQ's grants for long-term care research focused on nursing home quality. These grants included studies of inappropriate hospitalizations, pain management, racial differences in quality, appropriate antibiotic use and care for urinary incontinence. In FY 2001, the majority of new long-term care grants are in the areas of patient safety and the impact of healthcare working conditions on quality. Patient safety grants include both nursing home and home health care studies. About one-fourth of new healthcare working condition grants concern long-term care. They focus on working conditions of nurses and aides in both nursing home and home care. In addition, AHRQ is supporting conferences that help bring together researchers, providers, and policymakers interested in long-term care as well as holding health services research conferences focused on long-term care topics for State policymakers as part of the User Liaison Program.

AHRQ published a program announcement demonstrating an interest in the impact of payment and organization on cost, quality, and equity which includes an express interest in funding long-term care research in these areas in FY 2002. Through AHRQ's intramural program, we are conducting studies of nursing home acquired pneumonia, hospitalization of nursing home residents with pneumonia, inappropriate drug use, falls and fractures, incontinence, changing nursing home staffing, and changing home care expenditures. Other studies are focusing on the non-elderly disabled and include studies of factors affecting functional change across all settings of care. We are also funding the development of quality indicators in assisted living, and health care expenditures of assisted living residents. Recent publications include studies of minimum nursing standards for nursing homes, the relationship between cost and quality in nursing homes, the increasing competition in long-term care markets, and evidence that pressure ulcer care quality is improving. Intramural staff also are collaborating with CMS to develop long-term care quality measures to be included in the National Quality Report mandated by Congress, and to develop a consumer assessment of nursing home care based on the Consumer Assessment of Health Plans Survey (CAHPS) model that was developed by AHRQ.

### **Evidence-based Practice Centers (EPCs)**

While outcomes research is developing new knowledge on what works in health care, for whom, and under what conditions to improve practice in the years ahead, the Evidence-based Practice Centers (EPCs) program synthesizes the existing literature to inform practice improvements today. AHRQ's 12 EPCs develop evidence reports and technology assessments on therapies and technologies that are common, expensive, and/or significant for the Medicare and Medicaid populations. The EPCs systematically review and analyze the published scientific literature to develop the reports. Since 1997, the EPCs have conducted more than 80 systematic reviews and analyses of the literature on a wide spectrum of topics, and they have incorporated the results and conclusions into evidence reports and technology assessments. Some of these reviews are ongoing, and others have been published.

Users of these reports and assessments include doctors, medical and professional associations, health system managers, researchers, consumers organizations, and policymakers. These public- and private-sector organizations use the reports as the basis for developing their own clinical guidelines, performance measures, and other quality improvement tools and strategies. The reports and assessments often are used in formulating reimbursement and coverage policies. All EPCs collaborate with other medical and research organizations so that a broad range of experts can be included in the development process.

#### **FY 2001 AHRQ-funded EPCs and Technology Assessments**

- Effect of seasonal allergies on working populations
- Management of venous thrombosis
- Use of glycohemoglobin and microalbuminuria in diagnosis and monitoring of diabetes mellitus
- Neonatal hyperbilirubinemia
- Hyperbaric oxygen therapy for brain injury and stroke
- Vaginal birth following c-section
- Effect of patient safety on health care working conditions
- Management of bronchiolitis
- Management of coronary heart disease in women
- Making health care safer: Critical analysis of patient safety practices

Nominations of topics are solicited routinely through notices in the *Federal Register* and are accepted on an ongoing basis. Professional organizations, health plans, providers, and others who nominate topics are considered partners and agree to use the evidence reports when they are completed. AHRQ invites comments from interested parties about the EPC program with respect to what has worked well, what has not worked well, and what changes and improvements could be made. We also are interested in suggestions about new opportunities, such as what steps the agency can take to encourage more health care organizations and other relevant groups to translate EPC reports into clinical practice guidelines and related products.

AHRQ funded 28 new evidence topics in FY 2001, 8 of which were nominated by outside organizations, 2 that are part of AHRQ's patient safety initiative, and 1 that was funded in collaboration with another Federal agency.

AHRQ's evidence reports are being used by professional associations to create clinical practice guidelines, as well as Federal agencies, academic institutions, patient groups and health systems. Examples include the development of a guideline by the American Psychiatric Association (APA) based on the evidence report, "Depression Treatment with New Drugs;" use by the VA of the meta-analysis on Testosterone Suppression Treatment for Prostate Cancer as part of its continuing medical education program; and the development of a practice guideline by the American Academy of Pediatrics (AAP) based on the evidence report on "Diagnosis of Attention-Deficit/Hyperactivity Disorder." The AAP has released a second guideline on the management of this disorder, also based on an AHRQ-sponsored evidence report, prior to launching a three year, multi-faceted campaign to promote the implementation of these guidelines in practice. The program will include a variety of media events; development of physician tool kits,

patient materials, and educational curricula and conferences; all designed to facilitate improvements in clinical practice and patient behavior consistent with the scientific evidence outlined in the EPC evidence reports. Other recent studies that demonstrate the use of EPC expertise to help policymakers, researchers, and patients are:

- One EPC found that bone density measured at the hip by dual energy X-ray absorptiometry (DXA) is the best predictor of hip fracture, and that repeating the bone density tests within the first year of treatment is not recommended. This finding is particularly important to the estimated 14 million American women over age 50 who are affected by low bone density at the hip. Another EPC found that a synthetic hormone developed to replace a natural hormone was effective in reducing the need for transfusions in cancer patients with anemia resulting from chemotherapy.
- A Research Triangle Institute/University of North Carolina report completed in May 2001, *Systems to Rate Strength of Scientific Evidence*, that will be used to disseminate guidance on rating quality of evidence. AHRQ will develop and disseminate short summaries customized to the needs of several major audiences. These will help, for instance: busy clinicians who need to know quickly what to look for in the many journal articles on research findings; policymakers who rely on clinical studies in their decisionmaking role, whether for making coverage decisions or for implementing protocols in a clinical setting; the media who need to accurately report on, and not overstate, clinical research findings; and patients who need straightforward information in order to talk with their providers.
- A study currently being conducted by the RAND EPC, *Utilization of Physician's Services*, in response to the Balanced Budget Refinement Act of 1999. RAND is analyzing:
  - Various methods for accurately estimating economic impact on expenditures for physician services from (1) improvements in medical capabilities; (2) advances in scientific technology; (3) changes in the composition of enrollment of beneficiaries under the fee-for-service Medicare Program; and (4) geographic changes in locations where Medicare beneficiaries receive benefits;
  - Rate of usage of physicians' services; and
  - Other factors that may be reliable predictors of beneficiary utilization under the Medicare fee-for-service program.

### **National Guideline Clearinghouse (NGC)**

The National Guideline Clearinghouse™ (NGC), an Internet resource for evidence-based clinical practice guidelines located at [www.guideline.gov](http://www.guideline.gov), has now been operational for three years. The NGC was developed by AHRQ, in partnership with the American Medical Association (AMA) and the American Association of Health Plans (AAHP), to be a resource for physicians, nurses and other health care professionals.

NGC has more than 1,000 clinical practice guidelines submitted by over 165 health care organizations and other entities. New guidelines are being added to NGC weekly. Over the last three years, NGC has had over 4 million visitors, processed over 40 million requests, and received over 81 million hits. NGC now has over

The University of Michigan Health System (UMHS) in Ann Arbor has developed a program entitled Guidelines Utilization, Implementation, Development and Evaluation Studies (GUIDES). Now in its sixth year, UMHS has 10 of its guidelines in the National Guideline Clearinghouse (NGC).

“We consider the NGC a wonderful enhancement to our existing processes, and this is true across the spectrum of activity. The NGC is especially valuable in disseminating our work to colleagues in other institutions, and the variety of users is impressive. We have received inquiries from all over the world, and from a range of organizations,” states Dr. Renee Stiles, Ph.D., project manager, GUIDES.

46,000 visits a week. AHRQ does not require users of the National Guideline Clearinghouse to register in order to use the site. However, AHRQ recently completed the second customer satisfaction survey of NGC which does provide some insight into who uses the site. Physicians represented the largest portion of survey respondents (40.6%) followed by nurses and/or nurse practitioners (18.9%). 93.5% of respondents rated their overall satisfaction with NGC as either “fairly satisfied” or “very satisfied” compared with 89.1% for the First Annual Survey. Respondents to the survey also provided many useful comments on how they used it in their clinical work. For instance, a number of respondents reported using NGC to identify guidelines for adaptation in their health system or institution and a desire to find the best approach to treating their patients.

### **Clinical Preventive Services**

The Agency for Healthcare Research and Quality (AHRQ) links prevention research with clinical practice by sponsoring the U.S. Preventive Services Task Force (USPSTF) and the Put Prevention Into Practice (PIIP) program. The Task Force synthesizes the evidence-base and the PIIP program promotes the application of the Task Force results.

#### *The U.S. Preventive Services Task Force (USPSTF)*

The U.S. Preventive Services Task Force (USPSTF) is a critical source of information on what does and does not work in the health care system specific to prevention. First convened in 1984, the USPSTF is an independent panel of preventive health experts, charged with evaluating the scientific evidence for the effectiveness of a range of clinical preventive services--including common screening tests, immunizations, counseling for health behavior change, and chemoprevention--and producing age- and risk-factor-specific recommendations for these services.

The third USPSTF was convened in early FY 1999 and began work on 12 initial topics selected by Task Force members based on preliminary work by two of AHRQ’s Evidence-based Practice Centers: the Research Triangle Institute/University of North Carolina at Chapel Hill and the Oregon Health Sciences University.

In FY 2001, the third USPSTF issued its first four updated recommendations covering chlamydia screening, lipid screening, skin cancer, and bacterial vaginosis.

**Chlamydia screening.** The Task Force continued to recommend that primary care clinicians screen all sexually active women ages 25 and younger for chlamydia, as well as older women who are at risk for chlamydia, as part of regular health care visits. Chlamydia is the most common bacterial sexually transmitted disease in the

#### **12 INITIAL USPSTF TOPICS**

- Chemoprevention (for example, tamoxifen and related drugs) to prevent breast cancer (new topic).
- Vitamin supplementation to prevent cancer or coronary heart disease (vitamin E, folate, beta carotene, and vitamin C) (new topic).
- Screening for bacterial vaginosis in pregnancy (new topic).
- Developmental screening in children (new topic).
- Screening for diabetes mellitus (updated topic).
- Newborn hearing screening (updated topic).
- Screening for skin cancer (updated topic).
- Counseling to prevent unintended pregnancy (updated topic).
- Screening for high cholesterol (updated topic).
- Postmenopausal hormone therapy (updated topic).
- Screening for chlamydial infection (updated topic).
- Screening for depression (updated topic).

United States, with an estimated 3 million new cases each year. Most women have no symptoms when initially infected, but if they go untreated, they can develop pelvic inflammatory disease, infertility, and other serious health problems, including increased risk of HIV infection. Treatment with antibiotics is easy and effective.

**Lipid screening.** In a broadening of its 1996 recommendations, the USPSTF recommended that regular screening for high blood cholesterol and other lipid abnormalities, which can lead to coronary heart disease, should not have an upper age limit (previously set by the panel at age 65). The USPSTF also issued a new recommendation calling for the screening of younger adults for lipid abnormalities beginning at age 20 if they have risk factors for coronary heart disease such as diabetes, family history of heart disease, tobacco use, or high blood pressure. In addition, the panel revised its 1996 statement to recommend that for initial screening purposes, clinicians measure high density lipoprotein (HDL) cholesterol along with total cholesterol.

**Skin cancer.** The Task Force concluded, based on its most recent review of the literature, that there is still insufficient scientific evidence to determine whether regular total body skin examination for skin cancer is effective in reducing illness and death. This is the same conclusion the Task Force reached in 1996.

**Bacterial vaginosis.** Bacterial vaginosis is a common condition among women of childbearing age that results in a vaginal discharge caused by an imbalance in vaginal bacteria. Despite research showing that pregnant women with bacterial vaginosis have a higher risk of preterm delivery, the Task Force has concluded that the evidence does not merit regular screening for bacterial vaginosis in all pregnant women as an effective way to reduce the incidence of preterm delivery. For women at high risk due to a previous preterm delivery, however, the USPSTF found conflicting results regarding the benefit of screening and treatment and concluded that these options be left to the discretion of clinicians.

#### *Put Prevention Into Practice*

AHRQ's Put Prevention Into Practice (PIIP) program helps translate the evidence-based recommendations of the U.S. Preventive Services Task Force into practice through the development and dissemination of resources for providers, patients, and office systems. PIIP emphasizes the importance of a comprehensive, system-wide, team approach to delivering effective preventive interventions. AHRQ works closely with public and private partners to disseminate PIIP resources. PIIP materials include information on preventive services recommendations; an implementation guide, including flowsheets and other forms; and personal health guides for children, adults, and people over 50.

During FY 2001--in conjunction with the release by the third USPSTF of its recommendations on screening for chlamydia, lipid disorders, bacterial vaginosis in pregnancy, and skin cancer--work was completed on a new information kit, *What's New in Clinical Prevention?* The kit includes factsheets on the newly released topics and other information to promote the Task Force and PIIP. A prevention LISTSERV<sup>®</sup> was also developed.

During FY 2001, work was completed on *A Step-by-Step Guide to Delivering Clinical Preventive Services: A Systems Approach*. The guide describes easy to follow, logical steps to develop a formal system for delivering clinical preventive services. It is based on scientific and empirical evidence and has been found effective in many settings. The new guide breaks the process into small, manageable tasks; provides tools for tracking the delivery of preventive care, such as flowsheets and health risk profiles; includes worksheets and templates; and identifies resources for more information.

## **Bioterrorism**

In FY 2001, AHRQ invested \$5 million into bioterrorism-related research.

Examples of products and tools that are currently or soon will be available include the following:

- Researchers at the University of Alabama at Birmingham and Research Triangle Institute have developed Web-based training modules to teach health professionals how to address varied biological agents. Separate modules exist for ER practitioners, radiologists, pathologists, and infection control specialists. These clinicians can obtain continuing medical education (CME) credit at this site located at <http://www.bioterrorism.uab.edu>.
- Through collaborations with the University of Maryland, Emory University, District of Columbia Hospital Association, and Booz-Allen Hamilton, a questionnaire has been developed that can help assess the current level of preparedness of hospitals or health systems and their capacity to respond to bioterrorist attacks. The Department of Defense is already using this assessment in pilot work.
- In collaboration with the New York City Department of Health and the Mayor's Office of Emergency Management, AHRQ's Integrated Delivery System Research Network based at the Weill Medical College of Cornell University has developed a computer simulation model for city-wide response planning for bioterrorist attacks. This model for mass prevention of disease in the event of a bioterrorist attack will be validated by a live exercise funded by the Department of Justice.
- Researchers at the Children's Hospital of Boston are exploring the feasibility of building decision support models for information systems using linked health care data. These information systems would help to link the public health infrastructure with the clinical care delivery system to speed reporting and enhance rapid dissemination of relevant information. A preliminary product is a literature review that clarifies the potential of Web-based systems for clinicians to obtain timely information and report potential bioterrorist events to public health authorities.
- Researchers at the University of Pittsburgh and Carnegie-Mellon are continuing development on a "Real-time Outbreak and Disease Surveillance (RODS) System" for bioterrorist events. The purpose of RODS is to provide early warning of infectious disease outbreaks, possibly caused by an act of bioterrorism, so that treatment and control measures can be initiated to protect and save large numbers of people.
- The Science Applications International Corporation (SAIC) in collaboration with Johns Hopkins University, George Washington University, and the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) has completed extensive work on assessing and recommending improvement in the linkages between the medical care, public health, and emergency preparedness systems to detect and respond to bioterrorist events.
- AHRQ's User Liaison Program is planning an audio teleconference in January 2002 for State and local health policymakers to inform them of related research findings that could help them assess and strengthen the capacity of the health care system within their jurisdictions to respond to bioterrorism.
- The Primary Care Practice-Based Research Network at the University of Indiana is using a city-wide electronic medical records system as a model for surveillance and detection of potential bioterrorism events across a wide range of health care facilities, including primary care practices, public health clinics, emergency rooms, and hospitals.





## Strengthen Quality Measurement and Improvement

AHRQ's second research goal includes developing and testing measures of quality, as well as studies of the best ways to collect, compare, and communicate these data, and identifying and widely disseminating effective strategies to improve quality of care. To facilitate the use of this information in the health care system, the Agency focuses on research that determines the most effective ways to improve health care quality, including promoting the use of information on quality through a variety of strategies, such as information dissemination and assessing the impact on health care organization and financing.

### **Measuring and Improving the Quality of Health Care**

Millions of Americans receive high-quality health care services. The United States has many of the world's finest health care professionals, academic health centers, and other research institutions. However, an Institute of Medicine (IOM) report examining cancer care found that quality problems occur across all types of cancer care and in all aspects of the process of care. *Crossing the Quality Chasm* summarized problems with breast cancer care include "underuse of mammography for early cancer detection, lack of adherence to standards for diagnosis, inadequate patient counseling regarding treatment options, and underuse of radiation therapy and adjuvant chemotherapy following surgery." In FY 2002, AHRQ has called for applications which examine two different aspects of quality. The first Program Announcement (PA) seeks to fund research to better understand the impact of payment and organization on quality. AHRQ has already funded a grant in FY 2002 based on this program announcement. This grant, "Hospital Finances and the Quality of Hospital Care" will look at the relationship between a hospital's financial condition, its operational and resource allocation decisions, and the quality of clinical care at that hospital. Since many hospitals and provider organizations in the United States are facing significant financial constraints, it is important to understand the impact of financial conditions on operational decisions.

**IOM Report, *Crossing the Quality Chasm*, states:**

"Quality problems are everywhere, affecting many patients. Between the health care we have and the care we could have lies not just a gap, but a chasm."

The second PA with a quality dimension is Translating Research into Practice (TRIP). There are many important questions about how to translate research findings into improvements for patients and consumers, clinicians and health care delivery systems and policy makers. While many strategies have been developed to translate research into practice, developing new methodologies and evaluating which existing methodologies have the most meaningful impact on quality of care is a priority for all of AHRQ's research. By translating research into practice, this part of AHRQ's investigator-initiated portfolio will complete the research pipeline and yield more immediate improvements in Americans' health care. Recent and ongoing research is providing important insights regarding translation of evidence-based programs into practice, most often for individuals with specific clinical conditions (e.g., children with asthma, diabetes), and efforts to assess quality of care now provide both a stimulus for change and benchmarks for improvement.

Recent accomplishments: Thousands of Medicare patients with diabetes mellitus or atrial fibrillation can benefit from two new quality improvement tools developed with support from AHRQ. The test results for these tools were published in two articles in the June 13, 2001 issue of the *Journal of the American Medical Association*. Findings from a third AHRQ-funded study in the same issue can improve care at the end of life by encouraging more end-of-life discussions between HIV patients and their doctors.

In the diabetes study, University of Alabama at Birmingham researchers found that physicians who received periodic feedback reports based on chart reviews of their care of Medicare fee-for-service patients with diabetes mellitus, plus performance goals called "achievable benchmarks of care," significantly outperformed similar doctors who received only the chart reviews and standard performance feedback. Patients of doctors who were provided the benchmarks had 33 percent to 57 percent higher odds of receiving long-term glucose control measurement, serum cholesterol testing, foot exams and influenza vaccinations than patients of the other physicians. Achievable benchmarks of care are standards of excellence attained by top performers among peer physicians, which provide a reference for doctors to assess their own performance.

In the atrial fibrillation (AF) study, researchers found that their new CHADS2 method for predicting risk of stroke in patients with this condition is more accurate than existing methods. CHADS2 is an acronym for the risk factors for stroke in patients with AF - congestive heart failure, hypertension, advanced age, diabetes and a prior stroke. While physicians agree that warfarin therapy is favored when the risk of stroke is high, and aspirin when it is low, there has been little agreement on how to predict the risk of stroke. By more accurately estimating the risk of stroke in a patient with AF, doctors and their patients can make better decisions about which anti-thrombotic therapy to use. CHADS2 may be especially helpful for identifying low-risk patients who, by taking aspirin, can avoid the office visits, expense and risks of taking warfarin, which has to be closely monitored because of its higher risk of causing bleeding. AHRQ will work with Medicare and the private sector to promote the use of these tools in practice.

The third AHRQ-funded study in the June 13 issue of *JAMA* found that half of all HIV-infected persons in the United States, and especially-African Americans, Hispanics, intravenous drug users, and less well educated individuals, never talk about end-of-life care with their doctors. Such discussions could result in better understanding by physicians of what types of care patients desire when they are very ill and close to death. In addition, discussions may lead to a patient designating a surrogate to make decisions if he or she is unable to do so. These approaches could greatly improve the experience of deaths for patients and their caregivers.

### **Patient Safety and Reducing Errors in Medicine**

The November 1999 report of the Institute of Medicine (IOM), *To Err is Human: Building a Safer Health System*, focused a great deal of attention on the issues of medical errors and patient safety. The report indicated that as many as 44,000 to 98,000 people die in hospitals each year as the result of medical errors. Even using the lower estimate, this would make medical errors the eighth leading cause of death in this country.

More people die annually from medical errors than from automobile accidents (43,458), breast cancer (42,297), or AIDS (16,516). It is estimated that about 7,000 people each year die from medication errors alone—about 16 percent more deaths than the number attributable to work-related injuries.

Although the increased public attention on this issue is a recent phenomenon, AHRQ has recognized for some time that reducing medical errors is critically important for improving the quality of health care. In 1993, the agency published one of the first reports focused on medical errors. This landmark report noted that 78 percent of adverse drug reactions were due to system failures, such as the misreading of handwritten prescriptions. Subsequent studies

Americans have a very real fear of medical errors. According to a National poll conducted by the National Patient Safety Foundation:

- 42 percent of respondents had been affected by a medical error, either personally or through a friend or relative.
- 32 percent of the respondents indicated that the error had a

sponsored by the agency have focused on the detection of medical errors, investigation of diagnostic inaccuracies, the relationship between nurse staffing and adverse events, computerized adverse drug event monitoring, and computer-assisted decisionmaking tools to reduce the potential for errors and improve safety.

In FY 2001, AHRQ invested \$50 million in 94 new research grants, contracts, and other projects to reduce medical errors and improve patient safety. This effort represents the Federal Government's largest single investment in research on medical errors. These projects will address key unanswered questions about when and how errors occur and provide science-based information on what patients, clinicians, hospital leaders, policymakers, and others can do to make the health care system safer. The results of this research will identify improvement strategies that work in hospitals, doctors' offices, nursing homes, and other health care settings across the Nation. AHRQ's \$50 million investment is the first phase of a multi-year effort; AHRQ was appropriated \$55 million for patient safety in FY 2002.

The six major categories of AHRQ's FY 2001 patient safety initiative are provided in the box on the following page.

## FY 2001 Patient Safety Initiative Categories

**Identifying methods for reporting medical errors data.** This involves 24 demonstration projects to study different methods of collecting data on errors or analyzing data that are already collected to identify factors that put patients at risk for medical errors.

**Using computers and information technology to prevent medical errors.** This group of 22 projects will develop and test the use of computers and information technology to reduce medical errors, improve patient safety, and enhance quality of care.

**Understanding the impact of working conditions on patient safety.** These eight projects will examine how staffing, fatigue, stress, sleep deprivation, and other factors can lead to errors.

**Developing innovative approaches to improving patient safety.** This involves 23 projects that will research and develop innovative approaches to improving patient safety at health care facilities and organizations in geographically diverse locations across the country.

**Disseminating research results.** This group of 7 projects will focus on educating clinicians and others about the results of patient safety research. This work will help develop, demonstrate, and evaluate new approaches to improving provider education in order to reduce errors, such as applying new knowledge on patient safety to curricula development, continuing education, simulation models, and other provider training strategies.

**Additional patient safety research initiatives.** AHRQ funded 10 additional projects

Recent Accomplishment: In July 2001, AHRQ released new evidence on practices that can improve patient safety throughout the nation's health care system. The evidence report, compiled by the Evidence-based Practice Center at the University of California San Francisco/Stanford University, reviewed the evidence on a total of 79 patient safety practices. It lists 73 that are likely to improve patient safety and describes 11 that the researchers considered highly proven to work but are not performed routinely in the nation's hospitals and nursing homes. The report, *Making Health Care Safer: A Critical Analysis of Patient Safety Practices*, is the result of a comprehensive review of the literature from medicine, aviation, and other relevant fields.

Among the 11 highly proven practices are giving patients antibiotics just before surgery to prevent infections, using ultrasound to help guide the insertion of central intravenous lines and prevent punctured arteries and other complications, and giving surgery patients beta blockers to prevent heart attacks during or after the operation. Some practices are not included because they lack sufficient testing to be considered highly proven or they carry important potential risks. These include the increasing use of antibiotics to prevent infections, which has the potential to create antibiotic resistance. The report also is being provided to members of the National Forum for Health Care Quality Measurement and Reporting (NQF), which includes consumers, public and private purchasers, employers, health care providers, accrediting bodies, and organizations involved in health care research or quality improvement. The NQF plans to use this information to develop a list of measures that patients throughout the nation can use to determine the actions that hospitals and/or health care facilities can take to improve safety.

### **Progress Toward a National Report on Quality**

AHRQ is developing the first-ever annual report on the quality of health care in the United States, as called for in AHRQ's reauthorization legislation, which became law in December 1999. The goal of the report is to provide a clear, easily understood picture of the quality of health care in America and to highlight areas where improvement is needed. The development of a national report on health care quality is an important step in improving the quality of the Nation's health care system.

The project is being led by AHRQ with collaboration from the National Center for Health Statistics. An interagency work group will develop the final content and design of the report. Other members of the work group include the Office of the Assistant Secretary for Planning and Evaluation of the Department of Health and Human Services, the Centers for Disease Control and Prevention, the Centers for Medicare and Medicaid Services, the National Institutes of Health, and the Substance Abuse and Mental Health Services Administration.

Work on the National Quality Report (NQR) is proceeding in four areas: developing a conceptual framework for reporting, identifying potential measures to populate the framework, identifying data sources for potential measures, and conducting audience research on report design.

Conceptual framework. AHRQ commissioned a study with the Institute of Medicine (IOM) to work on a conceptual framework for the NQR. The IOM formed a 14-member committee of leading experts in quality and quality measurement, chaired by Dr. William Roper. The committee heard testimony from a wide variety of groups, including: the National Forum for Healthcare Quality Measurement and Reporting, Foundation for Accountability, National Committee for Quality Assurance, Joint Commission on Accreditation of Healthcare Organizations, American Medical Accreditation Program, leading academic researchers, and international experts. The committee has completed its work and recommended a conceptual framework that includes both dimensions of care (e.g., safety, effectiveness, patient centeredness, timeliness, equity) and patient needs (e.g., staying healthy, getting better, living with illness, coping with the end of life). The quality monitoring system developed for the NQR will be organized around this framework.

Measures. AHRQ has formed an interagency workgroup to identify candidate measures for the report. This workgroup reviewed measures included in existing quality measurement systems. This was supplemented by a multi-step "call for measures" that was sent to all relevant Federal agencies. The IOM initiated a complementary call for measures to the private sector. Measures identified through these processes form a pool of candidate measures for the report. The IOM identified a set of criteria to use to evaluate candidate measures, which includes: importance, scientific soundness, and feasibility. The workgroup is evaluating the candidate measures using these criteria, with the aim to populate the framework for reporting developed by the IOM. We anticipate that there will be adequate measures for some dimensions of the framework, but that measures will be sparse for others. Areas where measures are sparse will help define AHRQ's future research agenda in quality measurement.

Data sources. AHRQ has started efforts to identify existing data sources that might be used to support the NQR. Potential sources fall into several categories, including: population-based data collection efforts, establishment/provider-based data collection efforts, administrative/regulatory data collection efforts, vital statistics, and surveillance activities. AHRQ also is modifying existing data sources to better support the NQR. For example, AHRQ is enhancing the Medical Expenditure Panel Survey by increasing the size and geographic dispersion of the sample and adding quality-related content. We anticipate that the first NQR will rely heavily on existing Federal databases. As time goes on, private data sources will likely take on added importance. We have begun a project looking at private sector data that may be appropriate for the report.

Audience research. AHRQ will be conducting research to identify the needs of potential audiences

for the report and to develop a report design to meet those needs. There will be several rounds of research, including testing on general design, report organization, measure selection, and presentation format. AHRQ also initiated a project to review existing reporting systems to inform the development of the NQR. The purpose of the effort is to conduct a comprehensive literature search for information on quality reporting programs in the U.S. and internationally. The information will be analyzed to identify common themes and best practices among other reporting entities. This input will be used to help design the NQR prototypes that go to audience testing. The focus of initial audience research for the NQR is on written products (a short report to Congress that highlights important findings and technical appendices that include detailed tables, the specifics of our methodology, etc.). As time goes on, we plan to develop a web-based product that will allow users to drill down from national-level data to obtain detail on quality performance measures for population subgroups and smaller geographic areas (e.g., regions, States).

### **Healthcare Working Conditions on the Quality of Care**

Increasing our understanding of how working conditions affect health care workers, the risks for errors, and the quality of services provided to patients is of major importance to the health care industry. Recent efforts to reduce costs and streamline the delivery of care have led to significant changes in the health care workplace. The experiences of other industries demonstrate that differences in the equipment and physical characteristics of the workspace, changes in work responsibility and process, and differences in staffing levels can affect the quality of the products or services provided. For example, research on working conditions in the aviation industry has provided evidence of the relationship between aviation safety and work hours, including the effect of factors such as fatigue, lack of sleep, and shift work.

Despite the importance of these factors, there has been scant research focused on the importance of the quality of the workplace environment--not only for worker satisfaction, worker health, and the avoidance of disability, but also for the quality and productivity of the work performed. Workplace factors, including the way work is organized and staffed, may pose a threat, not only to the health and well-being of workers, but also to the quality of care they provide to patients and the safety of the patients.

In FY 2001, AHRQ funded over 30 projects that will examine the effects of working conditions on health care workers' ability to provide safe, high-quality care in ambulatory, inpatient (both hospital and long-term care institutions), and home care settings. Examples of the critical issues to be addressed include:

- Effects of extended work hours, sleep deprivation and fatigue, and stress on residents and nurses working in hospital-based settings.
- Relationship between working conditions--such as nurse to patient ratios, workload, and skill mix--and the occurrence or near occurrence of medical errors or adverse events.
- Impact of workplace characteristics, organizational culture, and teamwork on the safety, quality, and outcomes of care in inpatient settings, specifically intensive care units and surgical settings.
- Relationship between nursing home working conditions--such as staffing levels, job design, and job satisfaction--and worker outcomes, patient outcomes, and quality of care.
- Impact of financial incentives and the work environment on the quality of care in both ambulatory and inpatient settings.
- Effects of employee training, satisfaction, and understanding of patient safety on patient outcomes and quality of care.

### **Help for Patients and Consumers of Health Care**

Americans are demanding greater value and quality in their health care. To achieve these goals in today's rapidly changing health care environment, consumers need solid, reliable information to help them choose among health care plans, practitioners and facilities, and to participate more actively in their personal health care decisions. AHRQ plays a unique role in helping to provide the information consumers need and want.

#### *Consumer Assessment of Health Plans (CAHPS)*

The Consumer Assessment of Health Plans (CAHPS) is an easy-to-use kit of survey and report tools that provides reliable information to help consumers and purchasers assess and choose among health plans. Information from CAHPS surveys was available to help more than 90 million Americans with their 2000 health care benefits decisions. There are CAHPS data available to nearly 40 million Medicare beneficiaries on 280 plans. These beneficiaries received the assessment of beneficiaries enrolled in managed care plans. Data were provided in the handbook sent to each beneficiary and were placed on the Medicare.gov website.

Building on previous CAHPS accomplishments:

- AHRQ and CMS collaborated with the CAHPS consortium to develop a Medicare CAHPS Disenrollee Survey of beneficiaries enrolled in managed care plans that was fielded by CMS in FY 2000. Approximately 80 percent of this survey related to quality. By obtaining the reason for disenrollment, it is possible to distinguish between those that are unrelated to quality (e.g., moving out of the area that the plan serves) and those that are related to quality (e.g., limited access to specialists).
- In collaboration with the California Health Care Foundation and the Pacific Group on Health, the team has developed a version of CAHPS to assess care given at the group practice level. This is in response to strong consumer interest in more detailed information about the ability of physicians in group practices to provide high quality care. In CAHPS II, the team will work on the development of reports to convey survey results to consumers as well as to the group practices which they assessed. An additional goal is to develop strategies for working with physicians to improve areas that consumers identified as troublesome.
- A partnership between the CAHPS consortium and the Foundation for Accountability, with support from the David and Lucille Packard Foundation, has led to the development of a CAHPS survey to identify children with special health care needs and collect additional information on the extent to which health plans are meeting their special health care needs. This tool is already in use by numerous State Medicaid and SCHIP agencies to assist them in meeting the requirements set forth in the 1997 Balanced Budget Act. The NCQA has included this survey as a requirement in the HEDIS reporting set.
- Continuing to add to the family of CAHPS surveys, CMS and AHRQ are also collaborating on the development of a CAHPS survey to obtain consumers' assessments of health and services received in nursing homes. The data, collected from nursing home residents and next of kin, will be used to help persons who are choosing a nursing home. The survey is going through developmental testing to identify the appropriate domains for the survey and prepare the questionnaire and sampling and data collection procedures. This phase was completed in September 2001. Additional testing will be carried out in the next fiscal year.

Grants to continue this work (CAHPS II) will be awarded in the first part of FY 2002. CAHPS II will focus on development and testing of new and more effective ways to report quality data to consumers, patients, caregivers, and purchasers and will also translate the questionnaires and reports into languages in addition to Spanish and English. This RFA also includes the development of assessment instruments for people with mobility impairments and more refined



questionnaire items for people who receive care through PPO's. As mentioned above, the team will also move in a new direction: working with caregivers and plans to use CAHPS data for the purpose of quality improvement.

## **Identify Strategies to Improve Access, Foster Appropriate Use, and Reduce Unnecessary Expenditures**

Adequate access to health care services continues to be a challenge for many Americans. This is particularly true for the poor, the uninsured, members of minority groups, rural residents, and other priority populations. In addition, the changing organization and financing of care has raised new questions about access to a range of health services, including emergency and specialty care. At the same time, examples of inappropriate care, including overutilization and misuse of services, continue to be documented. Through ongoing development of nationally representative and more specialized databases, the production of public-use data products, and research and analyses conducted by AHRQ staff and outside researchers, the Agency addresses critical policy issues pertaining to the access, cost and use of health care.

### **Investigator-initiated Research - Impact of Payment and Organization on Cost, Quality and Equity**

Health care in the United States is provided within large systems, with complex funding streams. To improve the quality and efficiency of that care, providers, purchasers and policymakers need knowledge about how these systems operate and how different financial and organizational arrangements affect health care. The IOM report identified a "chasm" between the health care we have and the health care we could have. It also identified that this gap to a large extent springs from two overarching system features: the way we pay for care, and the way we structure the organizations that provide it. AHRQ's FY 2002 research grant portfolio will address questions such as:

- How do different payment methodologies and financial incentives affect quality, access and cost of care?
- How can payment arrangements be better designed to provide appropriate incentives to both patients and providers and to enhance patient-centered knowledge of and compliance with treatment regimens?
- How does consumer and patient decisionmaking influence payment policies?
- How do different patterns and levels of market competition affect the quality and cost of care? Of particular interest would be the impact of employer and coalition efforts on the quality and cost-effectiveness of care in the marketplace, the impact of State efforts to monitor and improve access and quality, and the impact of public and private payment changes on the health care safety net.
- What organizational structures and processes are most likely to sustain high-quality, efficient health care?

To address these important issues, AHRQ developed a program announcement in FY 2001 on the effects of payment and organizational structures and processes on the cost, quality, and

#### **Investigator-initiated Grant – Cost-effectiveness Research**

Valuation of the EuroQol Group EQ-5D (University of Arizona) - Policy makers are expected to make decisions about how best to use limited resources. One of these decisions might be whether limited resources should be spent on a specific medical intervention. Is the intervention "cost effective?" To make a good decision, policy makers should know how much the intervention costs and how the resulting outcome is valued from patients' perspectives. Researchers at the University of Arizona will collect data about how persons in the U.S. value various outcomes by using the "EQ-5D, a measure of health status that uses 5 dimensions--mobility, self care, usual activities, pain/discomfort, and anxiety/depression. This information has never been collected in a systematic manner in a representative sample of the U.S. population. The researchers will ensure that valid and reliable information will be obtained about the population generally, as well as Hispanics and non-Hispanic blacks, the two largest minority population groups in the U.S. In addition to using this information to analyze changes in individuals' health status, a score can be developed that describes how groups of people value various levels of health status information

equity of health care. Important issues to be addressed by this research include the effects of different payment mechanisms and financial incentives on health care quality, costs, and access; the impact of purchaser and public sector initiatives on quality, costs, and access to health care and health insurance; the organizational structures most likely to sustain high-quality, accessible health care; and the impact of different patterns and levels of market competition on health care quality and costs.

### **Research on Health Care Markets and Managed Care**

From a growing, rich body of social science evidence we are learning that market dynamics and delivery system organization not only matter, but are critical determinants of patients' access, quality of care, outcomes and health care costs. Over the last several years, AHRQ's portfolio has given special emphasis to two areas of inquiry, each focusing on particular patient populations: What managed care features improve the quality of care given to patients with chronic conditions?

What public insurance program policies and practices improve access to, and the quality of, health care for low-income children? Each area of inquiry was selected in direct response to decision-maker needs for information about key market and delivery system determinants and how deliberate or unintended changes in these determinants affect the care of these special populations. In addition to these two foci, AHRQ has supported a broader portfolio related to marketplace complexities and delivery system organization.

#### **Recent accomplishments:**

To build an evidence base on how best to provide care to the millions of patients with chronic conditions, AHRQ teamed with the American Association of Health Plans Foundation and AHRQ's sister agency, the Health Resources and Services Administration (HRSA), in 1998. A sample of the resulting findings, which are relevant to health plans, purchasers of health plan coverage, and plan enrollees who have chronic conditions, are listed below. Most of these projects will yield final results in the year ahead.

- The choice of compensation method used by independent practice associations (IPAs) and health maintenance organizations (HMOs) to pay physicians has an impact on quality of care. In a study of over fifty group practices, IPA/HMO payment formulas that capitated ophthalmology group practices and provided bonuses to individual physicians (as opposed to fee for service) were associated with lower satisfaction ratings among patients with diabetic retinopathy and open-angle glaucoma—two leading causes of blindness – than fee-for-service payment formulas.
- Independent practice association (IPA) networks consistently experienced worse process and outcome quality indicators for patients with chronic heart and lung diseases than more tightly managed medical groups.

To determine how public health insurance programs could improve access to and the quality of health care for low-income children, AHRQ joined with the David and Lucile Packard Foundation and AHRQ's sister agency, HRSA, in 1999 to fund a body of research. The resulting findings, a sample of which is listed below, will benefit State Children's Health Insurance Programs (SCHIP) as well as Medicaid, and the children enrolled in them.

- The method used by State Children's Health Insurance Programs (SCHIP) to periodically re-determine the eligibility of enrollees has an impact on continuity of coverage. State

eligibility re-determination requirements for SCHIP enrollees generated large disenrollments in three of the four States that were studied, though up to one quarter of children returned within two months. In the fourth State, a passive re-enrollment policy eliminated excess disenrollment at the point of eligibility re-determination.

For each of these portfolios of findings, AHRQ has developed a coordinated and creative package of dissemination strategies tailored to the relevant user groups. Strategies include targeted briefings, conference presentations, mailings, web postings and publications.

### *Integrated Delivery System Research Network (IDSRN)*

Improving care practices and collecting evidence about what works and what does not work in our largely private health care system requires use of private-sector data and partnerships between researchers and providers of care. Private-sector databases are not generally accessible to most of the scientific research community. The Integrated Delivery System Research Network (IDSRN), a new model of research developed this past year, links the Nation's top researchers and some of the largest health care systems with AHRQ. In so doing, it enables AHRQ researchers to conduct studies and collect information available only in the private sector to address HHS' public policy priorities and develop evidence that health system leaders can use to improve care. The IDSRN comprises nine partner organizations that provide care to over 50 million Americans, including privately insured patients, Medicare and Medicaid patients, the uninsured, ethnic and racial minorities, and rural and inner-city residents.

AHRQ funded 16 projects in 2001, with timelines that range from 12 to 18 months. Eleven of these projects focus on improving patient safety and working conditions for health care workers, and five focus on reducing disparities in health care delivery. Specifically, the researchers will:

- Examine ways to improve the care delivered to women, children, minority populations, and patients with limited English proficiency. This will enhance the capacity of health plans and health care delivery systems to identify and address disparities in health care delivery within their populations.
- Identify and test ways to improve patient safety and working conditions in a variety of care settings, and identify ways that successful strategies can be adopted in different organizational systems. This will provide health system managers and purchasers with the evidence they need to design and implement strategies to reduce errors in diverse settings.

### **HIV Research Network**

Swift changes in treatment regimens resulting from continuous drug therapies are having a profound effect on resource use by people with HIV infection. Medicaid, Medicare, the Department of Veterans Affairs, and the Ryan White CARE Act spend more than \$9 billion each year to treat people with HIV disease. Yet, because change is occurring so quickly, data that were collected as recently as 3 years ago do not reflect the current situation and cannot be used reliably for policy and planning purposes.

In 1999, AHRQ joined with the Substance Abuse and Mental Health Services Administration (SAMHSA), the Health Resources and Services Administration (HRSA), and the Department's Assistant Secretary for Policy and Evaluation (ASPE) to establish a pilot HIV data center at the Johns Hopkins School of Medicine. The goal was to collect current information about a large number of individuals who have HIV disease from providers who specialize in HIV care and build a

set of associated, publicly available databases about the characteristics of patients and the care they receive. Although the HIV Research Network produces real-time information about access, costs, and quality of care, its databases will not include any patient or provider identifiers.

In 1999, researchers at the data center tested on a small scale the feasibility of transmitting data from HIV caregivers. These included data on patient characteristics, payer data, clinical data, and data on the number of visits and admissions. In FY 2000 the pilot was deemed successful and NIH's Office of AIDS Research joined the collaboration, and efforts were expanded to collect data from 20 to 30 providers who treat at least 20,000 people with HIV disease. Preliminary data analyses indicate that there are serious disparities among people with HIV disease in their ability to receive expensive new drug therapies. Specifically, analyses show:

- Black women covered by Medicaid are less likely than other patients to receive new and expensive drug therapies.
- White patients are more likely than black or Hispanic patients to receive new therapies.
- Medicaid patients are less likely than privately insured patients to receive new drugs.

In FY 2001, based on the promising results from the pilot project, AHRQ initiated a contract to continue the project through FY 2005.

The HIV Research Network provides an ongoing means to collect timely information on resource use associated with HIV disease. It is a cost-effective way to obtain reasonably complete medical and financial information on a large number of HIV-infected patients, thus facilitating research on HIV care among different types of patients. Future plans include enrolling several new pediatric sites to examine access to care for children with HIV, as well as the costs and quality of care they receive. In addition, the HIV Research Network plans to conduct interviews with patients at each site to acquire information about their compliance with medication dosages and their access to mental health and substance abuse services.

### **Healthcare Cost and Utilization Project (HCUP)**

The unprecedented volume and pace of change in the U.S. health care system, and the fact that changes are not occurring uniformly across the country, require a new information standard. We at AHRQ have long recognized the need for scientifically sound, standardized databases and tools for using them, as well as the need to make these resources available at the national, regional, and State levels. The Healthcare Cost

<p><b>Nationwide Inpatient Sample (NIS)</b> is the largest all-payer inpatient database in the United States. It provides information on about 7 million inpatient discharges from about 1,000 hospitals, including data from 1988-1999. According to NIS data:</p> <ul style="list-style-type: none"> <li>• About 135,000 hospital stays a year for treatment of depression, and alcohol- and substance-related mental disorders are not covered by either private insurance or public insurance programs such as Medicare and Medicaid</li> <li>• Childbirth is the leading type of hospital care not covered by private insurance or public coverage. About 5 percent of all hospitalizations for childbirth—roughly 191,000 hospital stays a year—are uninsured.</li> <li>• Two chronic diseases, which if appropriately treated in primary care practices do not ordinarily result in hospitalization, also are</li> </ul>	<p><b>State Inpatient Databases (SID)</b> the SID comprise non-discharge data from the participating States ch represents about 67 percent of the over nt discharge abstracts in the U.S.</p> <table border="0"> <tr> <td>Georgia</td> <td>Maine</td> </tr> <tr> <td>New Jersey</td> <td></td> </tr> <tr> <td>California</td> <td>Hawaii</td> </tr> <tr> <td>Utah</td> <td>Colorado</td> </tr> <tr> <td>Oregon</td> <td>Virginia</td> </tr> <tr> <td></td> <td>Connecticut</td> </tr> <tr> <td>Michigan</td> <td>Pennsylvania</td> </tr> <tr> <td>Massachusetts</td> <td>Washington</td> </tr> <tr> <td></td> <td>Missouri</td> </tr> </table> <p>and Utilization Project is one of many ways in which AHRQ is addressing this need.</p> <p>HCUP is a Federal-State-industry partnership to build a standardized, multi-State health data system. This long-</p>	Georgia	Maine	New Jersey		California	Hawaii	Utah	Colorado	Oregon	Virginia		Connecticut	Michigan	Pennsylvania	Massachusetts	Washington		Missouri
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standing partnership has built and continues to develop and expand a family of administrative databases and powerful, user-friendly software to enhance the use of administrative data. Included in HCUP is hospital discharge information from State-specific hospital and ambulatory surgery databases, as well as a national sample of discharges from community hospitals. HCUP data are used at all levels to inform decisionmaking. HCUP continues to be a very valuable resource in light of recent findings that about 40 percent of personal health care expenditures in the United States go towards hospital care--making it the most expensive component of the health care sector.

FY 2001 accomplishments include increasing the number of States participating in HCUP; now half (29) of all States are HCUP partners, an increase of roughly 15 percent over the previous fiscal year. New State partners were selected based on their diversity--in terms of geographic representation and population ethnicity--they bring to the project, along with data quality performance and their ability to facilitate timely processing of data.

AHRQ also expanded HCUP beyond inpatient hospital settings to include hospital-based State ambulatory surgery databases (SASD). The number of States participating in the SASD increased from 9 in FY 2000 to 13 in FY 2001.

Additionally, a pilot of emergency department databases was expanded from one to five States. The State Emergency Department Databases (SEDD) capture hospital-affiliated emergency department encounters from data organizations in participating States.

AHRQ recently announced the availability of the Kids' Inpatient Database (KID), the first comprehensive research database exclusively concerned with inpatient care of children and adolescents in the Nation's community hospitals. The KID is the only dataset on hospital use, outcomes, and charges for children age 18 and younger, including newborns, regardless of whether they are privately insured, receive public assistance, or have no health insurance. The KID contains national estimates for 6.7 million pediatric discharges and data on various hospital characteristics such as region, location (urban/rural), size, ownership, and pediatric hospital status.

**Examples of information provided in the HCUP factbooks include:**

- The top five reasons for hospital admission are births, coronary arteriosclerosis, pneumonia, congestive heart failure, and heart attack.
- Organ transplantation is associated with some of the longest and most expensive hospital stays.
- Over one-third of all hospital admissions are through the emergency department.
- The average charge for a hospital stay is over \$110,000, and the average length of hospital stay is about 5 days.
- Medicare and Medicaid are billed for about 54 percent of all hospital stays.

During the past year AHRQ began a multifaceted effort to make HCUP data more accessible to researchers and other interested users. A centerpiece of this effort is HCUPnet, a free, interactive, menu-driven online service that allows easy access to national statistics and trends and selected State statistics about hospital stays. HCUPnet answers questions about conditions treated and procedures performed in hospitals for the population as a whole, as well as for subsets of the population such as children and the elderly. In addition, 10 States have agreed to include their data in HCUPNet. About 4,000 visits are logged each month on HCUPnet, which can be found at

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A second key component of our effort to facilitate researchers' access to HCUP data is the creation of a central distribution center for the State-level databases. Now researchers can go one-stop shopping instead of contacting each State on an individual basis.

- Data from HCUP have been used to produce reports that answer questions on reasons Americans are hospitalized, how long they stay in the hospital, the procedures they undergo, how specific conditions are treated in hospitals, and the resulting outcomes. In FY 2001, AHRQ launched an HCUP factbook series that is disseminated in print and through the AHRQ Web site. These factbooks were downloaded nearly 40,000 times in the first 6 months after they were posted on the Agency's Web site.

### **Medical Expenditure Panel Survey (MEPS)**

The Medical Expenditure Panel Survey (MEPS) is an annual (1996 to present) nationally representative survey of health care use, expenditures, sources of payment, and insurance coverage for the U.S. civilian noninstitutionalized population. The 1996 MEPS also included a national survey of nursing homes and their residents. This survey is AHRQ's main source to collect and examine comprehensive data that estimate the level and distribution of health care use and expenditures, monitor the dynamics of the health care delivery and insurance systems, and assess health care policy implications. Additional details regarding MEPS can be found on page 61.

## Commitment to Improved Health for Priority Populations

The overall health of the American people has improved over the last several decades, but not all Americans have shared equally in these improvements. Disparities persist despite improvements in health for the Nation as a whole. AHRQ research found that race and ethnicity influence a patient's chance of receiving many specific procedures and treatments. Of nine hospital procedures investigated in one study, five were significantly less common among black patients than white patients; three of the five procedures also were less common among Hispanics, and two were less common among Asian Americans. Other AHRQ-supported studies have revealed other disparities in patient care, including the following examples.

- Blacks are 13 percent less likely to undergo coronary angioplasty and one-third less likely to undergo bypass surgery than whites.
- Among preschool children hospitalized for asthma, only 7 percent of black and 2 percent of Hispanic children, compared with 21 percent of white children, are prescribed routine medications to prevent future asthma-related hospitalizations.
- The length of time between an abnormal screening mammogram and the follow-up diagnostic test to determine whether a woman has breast cancer is more than twice as long for Asian American, black, and Hispanic women as it is for white women.
- Blacks with HIV are less likely than other people with HIV to be on antiretroviral therapy, to receive preventive medicine for pneumonia, or to be given protease inhibitors.
- Black, Asian American, and Hispanic residents of nursing homes are far less likely than white residents to have sensory and communication aids, such as glasses and hearing aids.

We ensure that the Agency's research emphasizes the needs of priority populations who are generally underserved by the health care system and underrepresented in research. In 2001, the Agency began assembling an office dedicated to research on priority populations that will focus on children, women, minorities, the elderly and aging population, people with disabilities and/or chronic diseases, people who are terminally ill, people living in the inner city, rural residents, and low-income individuals and families.

### **Minority Health**

AHRQ has been investigating minority health issues for more than three decades. AHRQ's investments in minority health services research have resulted in numerous findings that are helping to shed light on the disparities experienced by racial and ethnic minorities and expand what is known about the reasons for those disparities.

In FY 2001, AHRQ supported \$48.4 million of research with a major emphasis on minority health. This effort includes: the Minority Research Infrastructure Support Program (M-RISP), a training program to increase the number of minority health services researchers and to expand the Nation's health workforce to be more diverse and representative of the racial and ethnic populations in America; and continuation of the Excellence Centers to Eliminate Ethnic/Racial Disparities (EXCEED) grants, a research effort that will improve the factors underlying ethnic and racial inequities in health care. Examples of findings from recent AHRQ supported research follow.



- About one black woman in four over 55 years of age has diabetes, which is nearly twice the rate of diabetes among white women. Hispanic women are almost twice as likely to have diabetes as non-Hispanic women of similar ages.
- Although breast cancer mortality declined 5.6 percent between 1990 and 1994, the decline was much greater among white women at 6.1 percent than among black women at 1 percent.
- Black Medicare beneficiaries are far less likely than white beneficiaries to receive flu shots, regardless of whether they are enrolled in a managed care or fee-for service health plan--68 percent of whites versus 46 percent of blacks received flu shots.

### **Women's Health**

The life expectancy of U.S. women has nearly doubled in the past 100 years, from 48 in 1900 to nearly 79 in 1996, compared with a 1996 average of 73 for men. Although women have a longer life expectancy than men, they do not necessarily live those extra years in good physical and mental health. Today, the chronic conditions of heart disease, cancer, and stroke account for 63 percent of deaths among American women, and heart disease causes more than one-third of these deaths.

Disease is not the only factor that impacts women's health. Domestic violence affects millions of women and their families each year. It is the second leading cause of injuries and death among women of childbearing age. Women from all racial and ethnic groups and income levels are victims of domestic violence, and the consequences are seen in a range of medical, obstetric, gynecologic, and mental health problems. Direct health care costs associated with domestic violence are estimated to be \$1.8 billion per year.

AHRQ was approached by a number of advocacy organizations and the Federal Steering Committee on Violence Against Women for assistance in developing a research-based performance standard for health care provided in the area of domestic violence. AHRQ and other HHS agencies worked together to convene a meeting of experts to develop a health services research agenda focused on the health aspects of domestic violence. AHRQ hosted a Senior Scholar in Residence to work on projects to provide scientific information on the cost, quality, and outcomes of domestic violence intervention programs available to victims in health care settings. In addition, AHRQ is developing a report to Congress on evidence-based clinical practices used by health professionals in providing care to victims of sexual assault, including child molestation, and on the training of health professionals for performing medical evidentiary examinations for victims of sexual assault, elder abuse, domestic violence, and child abuse and neglect.

In FY 2002, AHRQ continues 4 grants begun in FY 2000 in research to evaluate health system responses to domestic violence. These studies are the first of their kind and will move us beyond studying prevalence, screening, and training to take a rigorous look at a variety of health care interventions for domestic violence and their effectiveness. Women will be evaluated over time to identify interventions that improve the health and safety of victims, predict and improve health care use, prevent and reduce the occurrence of domestic violence, and develop better techniques to identify women at risk for domestic violence.

In addition, AHRQ supports research on all aspects of health care provided to women, and we have developed a new women's health initiative that broadened the program beyond the usual problems unique to women, such as breast cancer, to include studies that examine the differences in patterns of care between men and women. AHRQ is collaborating with the National Institutes of Health, Office of Research on Women's Health, in the Building Interdisciplinary Research Careers in Women's Health program (BIRCWH) to include a health services research component in support of the interdisciplinary focus of the programs to be developed.

#### **Women's Health Research Findings from AHRQ-supported Studies**

- The incidence of coronary heart disease in women has increased over the past decade, yet evidence suggests that women typically receive fewer high-technology cardiac procedures than men. Before age 75, women are more likely than men to die in the hospital after a heart attack.
- ER doctors misdiagnose about 2 percent of patients with heart attack or stable angina because they do not have chest pain or other symptoms typically associated with heart attack. When these patients are mistakenly sent home from the ER, they are twice as likely to die from their heart problems as similar patients who are admitted to the hospital.
- Blacks and women had statistically significant lower odds of being referred for cardiac catheterization than whites and men.

#### **Children's Health**

Improving outcomes, quality, and access to health care for America's 70 million children and adolescents is a critical goal of health services research and central to the mission of AHRQ. Understanding what's needed to improve health care delivery for children and adolescents requires a special research focus.

Because children are growing and developing, their health care needs and resource use differ from adults. Unlike adults, they usually are dependent on others for access to care and determinations about the quality of care they receive. Several AHRQ-funded studies on children's health have shown the importance of experience in caring for children.

AHRQ's work in this area helps to fill the major gap that exists in evidence-based information on the health care needs of children and adolescents. Such information is essential to appropriately guide clinical and policy decisions. The need for this information has become particularly critical since the implementation of the State Child Health Insurance Program (SCHIP).

To address the scarcity of quality measures for children, AHRQ is supporting the development, testing, and implementation of the Pediatric Quality of Life measures. Also, the National Committee for Quality Assurance for HEDIS adopted the children's component of AHRQ's Consumer Assessment of Health Plan Study (CAHPS) survey--the first time a health-plan-oriented survey of children was administered nationwide.

In FY 2001 and continuing into FY 2002, AHRQ supported child-relevant studies focused on outcomes; quality and patient safety; and cost, use, and access. Examples of these studies include:

- Develop the first comprehensive analysis of the management of suspected child abuse in primary care practices.
- Develop and evaluate a computerized laptop system for use in the examining room of primary care practices as an extension of an existing in-house prescribing system to improve the care of children with attention-deficit/hyperactivity disorder.
- Establish a Developmental Center for Evaluation and Research in Patient Safety (DCERPS) in neonatal intensive care to reduce medical errors and enhance patient safety for high-risk newborns and determine how to most effectively learn from those medical errors and then communicate the information to families.
- Determine whether the skills acquired within a simulated environment can be put into practice practices in the delivery room, and whether the practicing of these skills results in improved patient safety.
- Investigate the impact of having a child with asthma and the burden this condition causes on the family's resources (e.g., finances, the parents' time and availability for care, and access and barriers to health care).

### **National Disparities Report**

Disparities in health have been documented repeatedly over the last few decades across a broad range of medical conditions and for a wide range of ethnic and racial groups. These differences have been noted in health outcomes such as quality of life and mortality, processes of care such as utilization rates of certain services, quality and appropriateness of care, and the prevalence of certain conditions or diseases. The documentation of these widespread disparities has been an important contribution of outcomes and effectiveness research and health services research. Nevertheless, these insights have only infrequently led to significant improvements in eliminating racial and ethnic health disparities — in part, because the causes of and contributing factors to these differences are inadequately understood.

Disparities persist despite improvements in health for the Nation as a whole. For example, between 1987 and 1995, mortality from ischemic heart disease decreased 20 percent for the overall population but decreased only 13 percent for blacks. As minority populations continue to increase in size and proportion, the health of these groups will increasingly affect the health of the entire Nation. Also, lessons learned from understanding and eliminating disparities and improving the health care of underserved racial and ethnic groups, as well as those of a disadvantaged socioeconomic status, will likely be applicable to the United States population as a whole.

One responsibility of Federal and State policymakers is to help assure that all Americans have access to high-quality health care services. But sound responses from policymakers require solid information about the differences in health care delivery, and even now these data have not been systematically available. Thus, the Agency's recent reauthorization assigned it the

**Research Finding.** Patients of various ethnic and racial groups have different attitudes toward primary care physicians. Among different Asian ethnic subgroups, Chinese and Filipino patients appeared less likely to be satisfied with their physicians, while Japanese patients were least likely to say they would recommend their doctor. Latino patients rated physicians' accessibility and technical skills less favorably than did white patients. African American patients gave physicians' use of the latest technology and of psychosocial and lifestyle health promotion a higher rating than did white patients. These findings may represent actual differences in quality of care or variations in patient perceptions, expectations, and/or

task of preparing and publishing an annual report on prevailing disparities in health care delivery, comparing access, use and quality of health care services as they relate to racial/ethnic and socioeconomic factors in priority populations. This effort will be implemented in partnership with other Agencies to ensure synergy with existing efforts, including the Agency's National Healthcare Quality Report, HP 2010, and HHS survey integration priorities. This report will begin to provide answers on a national basis to the critical questions about disparities in health care: Are death rates for some inpatient procedures higher for certain racial/ethnic groups than others? Are African-Americans or Hispanics less likely to receive necessary services? Are people without insurance more likely to receive surgery in hospitals with high error rates?

Together, the complementary investments in the National Quality Report and the National Disparities Report will permit the development of a more complete picture of health care in America — who has access when and where, and how good that care is once received.

At present, AHRQ is working on the following: acquiring all the relevant non-Federal data for the report, data processing and analysis for the first NDR, assessment and development of quality measures for the on-going improvement of the report, and the design of NDR reporting products. The extensive data development needed for this project requires new ways of partnering with public and private organizations, and new ways of collecting and disseminating data and tools that can be used in tracking disparities in care for the public at large as well as for the subgroups particularly at risk. Incorporating databases from the private sector into the National Healthcare Disparity Report will provide a more robust and in-depth picture of disparities in American health care delivery. The integration of the private-sector data requires an investment in developing the methodology that makes such integration possible. Additional resources will be applied to the acquisition of suitable data sources from the private sector.

In addition, AHRQ is convening an IOM panel to inform the development of the report. The first meeting of the IOM panel is scheduled for January 28-29, 2002.

## Activities in Support of All Goals

### **Health Services Research Training**

AHRQ contributes to excellence in health care delivery through research conducted by a cadre of well-trained and talented health services researchers. To maintain and nurture this vital resource, the Agency supports a variety of training and career development opportunities through individual and institutional grant programs. These include:

#### *National Research Service Awards (NRSAs)*

AHRQ supports predoctoral and postdoctoral training through the National Research Service Award (NRSA) program. AHRQ awards NRSA training grants to institutions for predoctoral and postdoctoral training (the AHRQ Institutional Training Awards) as well as individual predoctoral and postdoctoral NRSA fellowships.

#### *Dissertation Research Grants*

Dissertation research funding is available for students conducting doctoral-level research on some aspect of the health care system. These grant awards are often the first step toward establishment of a health services research career.

#### *Career Awards*

AHRQ began to support career development activities in FY 2000. These awards, provided to individuals embarking on a research career, allow individuals time and resources to gain experience in carrying out actual research. The intent is to provide transitional support for newly trained investigators in order to launch them on research careers. This program will nurture the next generation of health services researchers. AHRQ supports two types of career awards:

- Independent Scientist Award (K02) in Health Services Research. The K02 provides support for newly independent investigators with a clinical or research doctoral degree to enable them to develop their research careers.
- Mentored Clinical Scientist Development Award (K08) in Health Services Research. The K08 provides support for the development of outstanding clinician research scientists who are committed to a career in health services research, with a focus on development as an independent scientist.

#### *Minority Research Infrastructure Support Program (M-RISP)*

The Agency is committed to the Department's Initiative to Eliminate Racial and Ethnic Disparities in Health and the complementary Healthy People 2010 Goal to Eliminate Disparities in Health. A critical component in achieving these goals is to expand the nation's health workforce to be more diverse and representative of the racial and ethnic populations in America. This includes bringing needed diversity to the health services research workforce.

In FY 2001, AHRQ launched the Minority Research Infrastructure Support Program (M-RISP). The goals of the M-RISP program are to increase the number of minority health services researchers, and to build capacity for institutions to conduct health services research intended to improve health for racial and ethnic minorities. This support will begin to enable approximately three institutions with relatively small research programs to develop into significantly stronger health services research centers. AHRQ funded 3 grants for \$1.2 million. The funded grants are provided in the

box below.

### **Minority Research Infrastructure Support Program (M-RISP)**

**Health Services Research in Underserved Populations (University of Texas Medical Branch)** - The goal is to increase this institution's ability to conduct health services research with a focus on medically underserved populations. The program will allow the university to increase the number of faculty who conduct health services research, recruit additional expert faculty, and strengthen its research capabilities.

**Hawaii Minority Research Infrastructure Support Program (University of Hawaii at Manoa)** - The objective is to build a program at the University of Hawaii Medical School that will evaluate ethnic health disparities in the State's Asian American and Pacific Islander populations. The program also will provide mentoring and training to inexperienced researchers, facilitate collaboration between Hawaii's health care organizations, and establish a nationally recognized mentoring group to assist in the implementation of research projects.

**Collaborative Minority Health Care and Quality Research (Tennessee State University)** - The objectives are to increase minority health care research programs at Tennessee State University and Meharry Medical College, establish collaborations with senior health services researchers at other universities, and conduct research to address racial and ethnic health care disparities.

### ***Building Research Infrastructure & Capacity Program (BRIC)***

In order to build research capacity in States that have not traditionally been involved in health service research, the Building Research Infrastructure & Capacity Program (BRIC) will be funded to pilot-test the feasibility of developing a program to broaden the geographic distribution of AHRQ funding and enhance the competitiveness for research funding of institutions located in States that have a low success rate for grant applications from AHRQ. Geographic regions that have received lesser amounts of AHRQ funding and have demonstrated a commitment to develop their research infrastructure will be eligible for these grants.

AHRQ funded six grants for over \$1.7 million in FY 2001. These grants will stimulate sustainable improvements in capacity and/or multi-disciplinary centers supporting investigators and multiple research projects with a thematic focus. The grants are highlighted on the following page.

## **Building Research Infrastructure and Capacity (BRIC)**

**Rutgers Center for Health Services Research (Rutgers State University of New Jersey)** - The center will allow researchers to build the State's expertise in health services research, including recruiting additional health services researchers to faculty positions, providing support for application development, developing a multi-use health database, and providing training, consultation, and technical assistance to State health officials and Rutgers University faculty.

**Intermountain Child Health Services Research Consortium (University of Utah, Salt Lake City)** - The goal is to develop an infrastructure for a child health services research program with emphasis on children with special health care needs, including development of a consortium, implementation of a faculty development program in child health services research, and conduct of a study to compare a pediatric hospitalist system and traditional care on outcomes of children with special health care needs.

**LSU Health Services Research Program (Louisiana State University Health Sciences Center)** - This project will establish the Louisiana State University (LSU) Health Services Research Program, which will function as a partnership between the university's medical school and an LSU unit that delivers health care to 1 million State residents, many of whom are uninsured and underinsured. The focus will be on translating research evidence into practice.

**Intermountain BRIC Consortium (National Association of Health Data Organizations)** - This project will improve the infrastructure and capacity of five Building Research Infrastructure and Capacity (BRIC)-eligible States (Idaho, Montana, Nevada, Utah, and Wyoming) and enhance their ability to compete for and be awarded health services research grants. The project will produce, among other resources, standardized analytic tools, a Web-based clearinghouse and communications module, health quality indicators, and a research agenda.

**Kentucky Health Services Research Development (University of Kentucky Research Foundation)** - The goal is to increase faculty research capability and grant-writing ability at the University of Kentucky by establishing the Kentucky HSR Development. One of the participants in this program will be a new practice-based research network, the Kentucky Ambulatory Network.

**Mississippi Building Research Infrastructure and Capacity (Mississippi State University)** - The objective is to implement a partnership between Mississippi's child care and health care providers, Mississippi State University, and the American Academy of Pediatrics to improve health care and outcomes for underserved, low-income, and minority children in the Mississippi Delta. The researchers will develop a multidisciplinary health services research program for one of the poorest rural areas of the Nation to assess the quality of care available for these populations, identify their current health care needs, and improve quality of care.

### **Dissemination Activities**

AHRQ promotes widespread distribution and implementation of its information and research products through a variety of dissemination methods: publication in professional journals; provider and consumer materials, media events and outreach; interviews and story placement with medical/trade press and organizations' newsletters; and articles in the popular press. AHRQ also employs public-private partnerships, direct mail, and the World Wide Web to distribute its information.

*AHRQ's Web Site*

Use of AHRQ's Web site continued to increase in FY 2001, with more than 22.6 million hits, compared with 18.8 million hits the previous year. User sessions also rose by almost a million visits-2.4 million, up from 1.5 million in FY 2000. Page views increased over 64 percent in FY 2001 at 8.9 million, compared with 5.4 million the previous year. Overall workload increased with 5,068 files and documents uploaded to the Web site, compared with 4,400 for FY2000.

AHRQ handled 4,006 electronic inquiries during FY 2001 through its Web site mailbox, up from 3,500 the previous year. These inquiries included requests for Agency information products, funded research, consumer health issues and concerns, technical assistance, referrals to other resources, and requests to use AHRQ electronic content on other Web sites or in electronic or print products.

The AHRQ Web site provided access to the summaries of reports issued from the Evidence-based Practice Centers and recommendations from the U.S. Preventive Services Task Force. The full text of these reports can be obtained at the National Library of Medicine, accessible through the AHRQ Web site. The Agency continued to work with the National Library of Medicine to upload evidence reports, technology assessments, and preventive services materials for clinicians on the full-text retrieval system HSTAT.

The Web site was used to provide more content on health services research issues for policymakers at the State and local level, including online learning modules relating to the State Child Health Insurance Program and quality performance measures in child health programs. A new subdirectory was also developed specific to Nursing Research interests and capacity building within the nursing community for research grants and career development.

A popular feature on the Web site continued to be a "Spanish" button, Información en español, which provides translations of our consumer health and patient information materials. Many users are the Spanish-speaking public, but clinicians with large Hispanic patient populations also use these materials for their patient education efforts.

Nearly 10,900 external Web sites linked to the AHRQ Web site home page or content within the site. This included three government portals prominently featured on the AHRQ site, which in turn provided referrals to the Agency's online consumer health and patient information materials: Firstgov, developed by the General Services Administration; the "healthfinder" gateway site, developed and maintained by the Department of Health and Human Services; and MEDLINE *plus*, developed and maintained by the National Library of Medicine.

Based on user feedback, various audience groups came to the AHRQ site for:

- New funding opportunities and subsequent award announcements.
- Press releases with contact information on key staff involved.
- Consumer and patient decisionmaking materials.
- Informative electronic newsletters on research activities.
- Clinical research resources to improve practice and health outcomes.
- Strategic planning to establish priorities and directions for State health programs.
- Facilitating health services research at the university level.
- Summaries of evidence-based information for medical practice.
- Preventive services recommendations and clinical practice support.
- Research information related to treatment of specific health conditions.
- Recommendations on quality of care issues and suggestions for improving health care.
- Updates on medical errors and patient safety initiatives.
- Understanding of quality measurement issues and tools.



- Learning more about AHRQ and related resources.
- Keeping abreast of new developments and up-to-date information on the changing health care system.
- Best practices and information on reducing the cost of providing health insurance.
- Data and statistics on health care costs and use.

Requests from outside organizations for use of electronic content from the AHRQ Web site included:

- Consumer materials on specific conditions and understanding the health care system for numerous consumer health Web sites as well as corporate intranets for employees.
- Clinical materials for medical Web sites for clinicians, hospitals, and health plan systems.
- Clinical and research materials for course packs in medical education and graduate training in public health issues.
- Information on reducing medical errors for managed care organizations member Web sites and newsletters.
- Preventive services information for adults and children for health education initiatives of health plans and employers.

### **User Liaison Program**

AHRQ's User Liaison Program (ULP) synthesizes and distributes research findings to local, State, and Federal policymakers so they can use it to make evidence-based decisions about health care. ULP sponsors small National and State-based workshops and telephone or Web-supported audio conferences to provide information to policymakers on the critical issues confronting them in today's changing health care marketplace. These workshops and conferences are user-driven and user-designed. ULP solicits input from legislators, executive agency staff, and local officials on policy issues where they need information and technical assistance.

In FY 2001, ULP sponsored 23 different activities-12 National workshops, 7 State-based workshops, one telephone conference, and one Web-assisted audio conference--attended by 2,376 health care policymakers from all 50 States, the District of Columbia, American Samoa, the Virgin Islands, and Guam. In FY 2000, ULP sponsored 17 events that provided training for 1145 attendees from 50 States and the District of Columbia.

In addition, in FY 2001 and 2002 the ULP team will produce research synthesis targeted to AHRQ stakeholders, our "Research In Action" series. Their purpose is to tell where we've had impact so that other stakeholders who are less advanced can learn from what others have done. AHRQ produced 3 research syntheses in FY 2001 and plan an additional 3 for FY 2002. AHRQ's goal is to produce at least 10 each year.

## **Funding History**

Funding for the Research on Health Costs, Quality and Outcomes program during the last five-years has been as follows:

	<u>Amount</u>	<u>FTEs</u>
1999 .....	\$139,314,000	212
2000 .....	\$165,293,000	243
2001 Actual – Current Law....	\$226,385,000	253
2001 Actual – Proposed Law.	\$227,897,000	253
2002 Appropriation.....	\$247,645,000	272
2002 Current Estimate.....	\$249,171,000	272
2003 Request – Current Law.	\$194,000,000	272
2003 Request – Proposed Law	\$195,611,000	272

Sources of Research on Health Cost, Quality and Outcomes funding follow:

	<u>Budget Authority</u>	<u>1 Percent Evaluation</u>	<u>Total</u>
1999 .....	97,967,000	41,347,000	\$139,314,000
2000 .....	107,717,000	57,576,000	\$165,315,000
2001 CL	102,255,000	124,130,000	\$226,385,000
2001 PL	103,485,000	124,412,000	\$227,897,000
2002 App.	-0-	247,645,000	\$247,645,000
2002 CE	-0-	249,171,000	\$249,171,000
2003 CL	-0-	194,000,000	\$194,000,000
2003 PL	-0-	195,611,000	\$195,611,000

## **Rationale for AHRQ's FY 2003 Request**

The FY 2003 request provides a decrease of \$53,560,000 for the Research on Health Costs, Quality and Outcomes budget activity. The major components are:

I	Department of Commerce – Current Population Survey	+	\$ 10,000,000
II	Secretarial Initiative to Improve Patient Safety - AHRQ	+	\$ 5,000,000
III	Research Management	+	\$ 4,400,000
IV	Accrued Retirement and Health Benefits Costs	+	\$ 86,000
V	Non-Patient Safety Research and Training Grants		
	Commitments	-	\$ 27,113,000
	New	-	\$ 39,291,000
VI	Non-Patient Safety Contracts	-	\$ 6,641,000

### **I - Department of Commerce's Current Population Survey +\$10,000,000**

AHRQ's request includes \$10,000,000 in FY 2003 to cover the annual cost to support a sample expansion to the Department of Commerce's Current Population Survey. In addition to sample expansion, these funds will support enhanced analytical content in order to improve the accuracy of State estimates of the uninsured and improve the measurement of the SCHIP expansions.

### **II - Secretarial Initiative to Improve Patient Safety +\$5,000,000**

In addition to the \$55,000,000 appropriated in FY 2002, AHRQ requests \$5,000,000 of new funds for activities that promote the translation of patient safety research into programs and products for health care systems with the goal of having measurable improvement in the safety of healthcare for Americans. The proposed budget activities will allow the Department to act on what we know works in improving patient safety while building for the future. These activities will be conducted in concert with other parts of the HHS, specifically the CDC, CMS, FDA, HRSA, IHS, and OASPE through the existing Patient Safety Task Force collaboration and the development of new coordinated activities. Through this coordination the Department will be able to develop synergy among the various Agencies investments in improving patient safety to ensure that the coordinated Departmental effort will produce a "whole which is greater than the sum of the parts."

#### *Building on AHRQ's Patient Safety Investment*

The new patient safety activities in FY 2003 will build on and enhance the work begun in FY 2001 and continuing in FY 2002. One of the initial results of work begun this year is the release of a report, *Making Health Care Safer: A Critical Analysis of Patient Safety Practices*, which examines the evidence supporting 79 promising patient safety interventions. Many of these proven lifesaving interventions, such as the use of medications to reduce the risk of heart attacks and infections in surgical patients, are not consistently implemented. AHRQ will use this evidence in FY 2003 to support cooperative agreements, called "challenge grants," that will help implement local safety improvement practices.

In FY 2001, AHRQ also funded a series of reports by the National Academy for State Health Policy to examine the ability of States to meet the patient safety challenge. These reports, as well as an April 2001 National Summit on Patient Safety Reporting, indicated that State health departments are committed to improving patient safety but need technical assistance. AHRQ initiated a review of various models used at the State level, for example CDC's EIS program, to develop a plan for training patient safety experts who will improve local capacity. Development for this capacity building effort will continue in FY 2002 and implementation will occur in FY 2003.

### *New Patient Safety Investment*

The FY 2003 patient safety initiative request \$5,000,000 to Implement Local Safety Improvement Priorities. This will be done in 2 ways: challenge grants and on-site patient safety experts.

#### Challenge Grants (\$3,000,000)

In July, 2001 the Agency released a report, entitled *Making Health Care Safer: A Critical Analysis of Patient Safety Practices*, which examined the evidence supporting 79 promising patient safety interventions. Many of these proven lifesaving interventions, such as the use of medications to reduce the risk of heart attacks and infections in surgical patients, are not consistently implemented. The \$3,000,000 will be used to implement local safety improvement priorities through challenge grants that will provide incentives to put systems-based interventions in place in healthcare organizations. Local communities and institutions would be asked to identify priority interventions they would like to implement from a menu of current fully developed evidence based interventions. A limited, seed challenge grant would be provided to the institution for initial implementation, with the actual cost of the intervention to be borne by the grantee. The grantee would be expected to demonstrate that the intervention works and to have data to back up conclusions and thus receive the remainder of the grant.

These challenge grants will complement the work of the CDC, CMS, and FDA in accelerating the implementation of existing patient safety practices to reduce medication errors, reduce hospital acquired infections, and eliminate preventable procedure and device related complications.

#### Measure of Success:

Nationally, 12 health facilities or regional initiatives will be funded to implement interventions and service models on patient safety improvements by 2004.

#### On-site Patient Safety Experts (\$2,000,000)

In addition, AHRQ requests \$2,000,000 for on-site patient safety experts. In FY 2001 the Agency funded a series of reports by the National Academy for State Health Policy which examined the ability of States to meet the patient safety challenge. These reports, as well as an April 2001 National Summit on Patient Safety Reporting, indicated that State health departments are committed to improving patient safety but need technical assistance to do so. In FY 2001 the Agency initiated a review of various models, including those from the CDC's Epidemic Intelligence Service (EIS) program and the Agriculture Extension program, which will inform the development of a program to train patient safety experts. The trainees will be used to improve local capacity in field assignments where they will provide technical assistance on information management, on-site assistance of experts in patient safety, support of regional health initiatives, and assistance in using administrative, regulatory, and payment mechanisms to support a culture of safety. The FY 2003 request will allow us to begin implementation of this training program.

#### Measure of Success:

On-site patient safety experts in 10 States and technical assistance to improve patient safety by 2004.

### **III- Research Management +\$4,400,000**

In FY 2003, AHRQ requests \$4,400,000 for research management costs. These funds will provide for current services, including annualization of the FY 2002 pay raise, the FY 2003 pay raise, and

inflation. This request also includes \$2,000,000 related to build-out costs for the consolidation of AHRQ 's space, as well as \$1,200,000 for relocation expenses to AHRQ's new building.

#### *Build-out Costs*

AHRQ is currently located at three different sites in Rockville, Maryland. AHRQ's eight offices and centers work closely together and the separation we now experience reduces maximum work efficiency.

The leases in these three locations expire in the summer of 2003. The lease at AHRQ's headquarters cannot be renewed as the building owner needs the space. The Agency initiated discussions with the General Service Administration (GSA) regarding the acquisition of consolidated space for the Agency in late 1997.

The acquisition for this new space was initiated and a lease was signed in September of 2001 with construction of the space completed by August/ September 2003. Leases of this nature include a minimal internal space build-out allowance that is amortized over the life of the lease. This typically amounts to 40 percent to 60 percent of total build-out costs. A construction contract is needed to fund the balance of these costs.

Funds in the amount of \$2,000,000 for this interagency agreement (IAA) are included in the FY 2003 request for completion of the internal space build-out that will be initiated in October 2002. These funds will be used to cover a full range of construction costs, including such things as office space, mechanical units, floor and wall coverings, electrical work, conference facilities, a research resource center, and an information technology server room to support the Agency's network infrastructure.

#### *Relocation Costs*

Included in this request is \$1,200,000 for costs associated with our relocation scheduled for August or September of 2003. Costs associated with the move include the physical transfer of property, e.g., furniture, boxes, and equipment; computer and telephone wiring; set-up of a security system; signs; and equipment and furniture needed for additional conference rooms.

### **IV- Accrued Retirement and Health Benefits Costs +\$86,000**

The \$1,700,000 in FY 2003 for accrued retirement and health benefits is an increase of \$86,000 over the prior year. These funds are associated with the proposed Managerial Flexibility Act of 2001. This legislation requires agencies, beginning in FY 2003, to pay the full Government share of the accruing cost of retirement for current CSRS, CIA and Foreign Service employees, and the Coast Guard, Public Health Service and NOAA Commissioned Corps. The legislation also requires agencies to pay full accruing cost of post-retirement health benefits for current civilian employees. The intention of the legislation is to budget and present the full costs of Federal employees in the accounts and programs where they are employed. This legislation is part of an initiative to link budget and management decisions to performance by showing the full cost of each year's program operations together with the output produced that year. These accrual costs are shown comparably in FY 2001 and FY 2002.

### **V – Non-Patient Safety Research and Training Grants (-\$66,404,000)**

The FY 2003 request provides no funding for new non-patient safety research and training grants. AHRQ will fully fund grant commitments for our translating research into practice grants (TRIP) and our Consumer Assessment of Health Plans Survey (CAHPS) grants.

Translating research into practice (TRIP) is the final step of the research pipeline. This step focuses on closing the gap between what we know and what we do. The Agency is committed to informing practitioners, patients, consumers and other decisionmakers about needed health care changes as revealed by research. As we obtain the knowledge of what can be improved, the Agency must be able to promote the adoption and use of these research findings. By doing so, we will be better able to demonstrate that the benefits observed in research are achievable in daily practice and yield measurable and sustainable improvements in health care. TRIP grants will be funded at \$7,000,000 in FY 2003.

CAHPS is an easy-to-use kit of survey and report tools that provides reliable information to help consumers and purchasers assess and choose among health plans. Information from CAHPS surveys was available to help more than 90 million Americans with their 2000 health care benefits decisions. There are CAHPS data available to nearly 40 million Medicare beneficiaries on 280 plans. These beneficiaries received the assessment of beneficiaries enrolled in managed care plans. Data were provided in the handbook sent to each beneficiary and were placed on the Medicare.gov website. CAHPS grants will be funded at \$2,500,000 in FY 2003.

Other than patient safety, TRIP and CAHPS grant commitments, some combination of reductions will be made to ongoing grant commitments reflecting a decrease of \$27,113,000 or 46 percent of the unprotected commitment base of noncompeting grants. New non-patient safety research grants, including supplements, decrease a total of \$39,291,000 from the FY 2002 level.

## **VI – Non-Patient Safety Research Contracts (-\$6,641,000)**

The FY 2003 request provides no funding for new non-patient safety research contracts. AHRQ will fully fund contract commitments for the Healthcare Cost and Utilization Project (HCUP) and for the contract component of CAHPS.

HCUP is a Federal-State-industry partnership to build a standardized, multi-State health data system. This long-standing partnership has built and continues to develop and expand a family of administrative databases and powerful, user-friendly software to enhance the use of administrative data. Included in HCUP is hospital discharge information from State-specific hospital and ambulatory surgery databases, as well as a national sample of discharges from community hospitals. HCUP data are used at all levels to inform decisionmaking. HCUP continues to be a very valuable resource in light of recent findings that about 40 percent of personal health care expenditures in the United States go towards hospital care--making it the most expensive component of the health care sector. HCUP is funded at \$4,100,000 in FY 2003.

With the exception of the patient safety contracts, the contract component of CAHPS, and the Healthcare Cost and Utilization Project (HCUP), some combination of reductions to non-patient safety contracts will be required reflecting a decrease of \$6,641,000 for non-patient safety research contracts, a reduction of 31 percent of the unprotected contract commitment base.



## Medical Expenditure Panel Survey (MEPS)

	2001 Actual	2002 Appropriation	2003 Request	2003 Request +/- 2002 Appropriation
<b>Current Law</b>				
-- BA	\$0	\$0	\$0	\$0
-- PHS Eval	(\$40,850,000)	(\$48,500,000)	(\$53,300,000)	+(\$4,800,000)
<b>Accrual Costs</b>				
-- BA	\$0	\$0	\$0	\$0
-- PHS Eval	(\$0)	(\$0)	(\$0)	(\$0)
<b>Proposed Law</b>				
-- BA	\$0	\$0	\$0	\$0
-- PHS Eval	(\$40,850,000)	(\$48,500,000)	(\$53,300,000)	+(\$4,800,000)
<b>FTE</b>	NA	NA	NA	NA

### **Purpose and Method of Operation**

The objectives of AHRQ's Medical Expenditure Panel Survey are to provide public and private sector decisionmakers with the ability to:

- ◆ Obtain timely national estimates of health care use and expenditures, private and public health insurance coverage, and the availability, costs and scope of private health insurance benefits among the U.S. population
- ◆ Analyze changes in behavior as a result of market forces or policy changes (and the interaction of both) on health care use, expenditures, and insurance coverage
- ◆ Obtain information on access to medical care, quality and satisfaction for the US population and for those with specific conditions, and for important sub-populations
- ◆ Develop cost and savings estimates of proposed changes in policy
- ◆ Identify the impact of changes in policy for key subgroups of the population (i.e., who benefits and who pays more)

These objectives are accomplished through the fielding of the Medical Expenditure Panel Survey (MEPS). MEPS is an interrelated series of surveys that replaces the National Medical Expenditure Survey (NMES). MEPS not only updates information that was last collected more than a decade ago in FY 1987, but also provides more timely health care expenditure data and new information on the quality of care received, at a lower cost per year of data, through the move to an ongoing data collection effort.

### **Overview**

AHRQ's Medical Expenditure Panel Survey collects detailed information regarding the use and



payment for health care services from a nationally representative sample of Americans. Since 1977, AHRQ's expenditure surveys have been an important and unique resource for public and private sector decisionmakers. No other surveys supported by the Federal government or the private sector provide this level of detail regarding: the health care services used by Americans at the household level and their associated expenditures (for families and individuals); the cost, scope, and breadth of private health insurance coverage held by and available to the U.S. population; and the specific services purchased through out-of-pocket and/or third-party payments.

AHRQ fields a new MEPS panel each year. Two calendar years of information are collected from each household in a series of five rounds of data collection over a 2½-year period. These data are then linked with additional information collected from the respondents' medical providers, employers, and insurance providers. This series of data collection activities is repeated each year on a new sample of households, resulting in overlapping panels of survey data.

The data from earlier surveys (1977 and 1987) have quickly become a linchpin for the nation's economic models and their projections of health care expenditures and utilization. This level of detail enables public and private sector economic models to develop national and regional estimates of the impact of changes in financing, coverage, and reimbursement policy, as well as estimates of who benefits and who bears the cost of a change in policy. No other surveys provide the foundation for estimating the impact of changes on different economic groups or special populations of interest, such as the poor, elderly, veterans, the uninsured, or racial/ethnic groups. The public sector [e.g., Office of Management and Budget (OMB), Congressional Budget Office (CBO), Medicare Payment Advisory Commission (MedPAC), and Treasury Department], relies upon these data to evaluate health reform policies, the effect of tax code changes on health expenditures and tax revenue, and proposed changes in government health programs such as Medicare. In the private sector (e.g., RAND, Heritage Foundation, Lewin-VHI, and the Urban Institute), these data are used by many private businesses, foundations and academic institutions to develop economic projections. These data represent a major resource for the health services research community at large. In the past year, data on premium costs from the MEPS Insurance Component have been used by the Bureau of Economic Analysis to produce estimates of the GDP for the nation. In addition, the MEPS establishment surveys have been coordinated with the National Compensation Survey conducted by the Bureau of Labor Statistics through participation in the Inter-Departmental Work Group on Establishment Health Insurance Surveys.

Based on the Department's Survey Integration Plan, MEPS linked its household survey and NCHS' National Health Interview Survey (NHIS), achieving savings in sample frame development and enhancements in analytic capacity. MEPS has also moved from a survey every ten years to following a cohort of families on an ongoing basis. Doing so has four primary benefits: it decreases the cost per year of data collected; it provides more timely data on a continuous basis; it creates for the first time the ability to assess changes over time; and it permits the correlation of these data with the National Health Accounts.

### **Accomplishments**

The first MEPS data (from 1996) became available in April 1997, and key findings are summarized in the table provided on the following page. This rich data source has become not only more comprehensive and timely, but MEPS' new design has enhanced analytic capacities, allowed for longitudinal analyses, and developed greater statistical power and efficiency.

## MEPS Products

Product	Significance
MEPS Household Component	<p>Full year household component has been released for 1996 -1998                      Partial data has been released for 1999-2000</p> <p><b>Key Findings: 2000</b>                      \$In the first half of 2000, 16.1 percent of the U.S. civilian noninstitutionalized population were uninsured.                      \$Among the U.S. civilian noninstitutionalized population under 65, more than a third of Hispanics (35.2 percent) and 23.2 percent of black non-Hispanics were uninsured during the first half of 2000, compared to only 14.2 percent of white non-Hispanics.                      \$Among people under 65, Hispanics accounted for one fourth (24.9 percent) of the uninsured civilian noninstitutionalized population even though they represented only 12.9 percent of the overall population for this age.                      \$Young adults aged 19-24 were the age group at the greatest risk of being uninsured, one-third (33.1 percent) of this group were lacking health insurance.</p> <p><b>Key Findings: 1999</b>                      \$Among those under 65, 82.1 percent of Americans had public or private insurance coverage                      \$Among adults under 65, married persons were more likely to have health insurance</p> <p><b>Key Findings: 1998</b>                      \$ Over one half of elderly Americans were covered by private insurance; more than 4 in 10 held only public coverage (Medicare with or without Medicaid). This represents a decline in private coverage from 1997 and an increase in public coverage                      \$ Less than half of all Hispanic Americans and about half of black Americans were covered by private health insurance, compared to three quarters of whites.                      \$ Close to a third (31.8%) of Hispanics and a fifth of blacks were uninsured. In contrast only 12 percent of whites were without insurance</p> <p><b>Key Findings: 1997</b>                      \$ During the first half of 1997, nearly 30% of children under age 4, one in four children ages 4-6, and close to one in five children ages 7-12 had public health insurance coverage.                      \$ Young adults (19-24) were most likely to lack health insurance. Over a third of young adults (34.6%) were uninsured.                      \$ 78.7% of workers were covered by private health insurance, compared to half of individuals who were not employed.                      \$ Among all racial/ethnic groups, Hispanic males were the most likely to be uninsured; 36.9% lacked coverage.</p> <p><b>Key Findings 1996</b>                      \$ Inpatient hospital care accounts for nearly 4 of 10 dollars spent on health care; Prescribed medications account for about 13 % of total expenditures.                      \$About 86% of the US civilian population had health care expenses. While the average expense was \$2,398 per capita, half of all people had expenses under \$559.</p>

Product	Significance
	<ul style="list-style-type: none"> <li>\$ 19.6% of privately insured children in single-parent families get health insurance coverage from a policyholder not residing in their household.</li> <li>\$ Almost 53% of children covered by Medicaid have at least one parent that works.</li>   <li>\$ A greater percentage of workers are being offered health insurance by their employers in 1996 than in 1987; however, a smaller proportion is accepting insurance.</li> <li>\$ Nearly 18% of the population had no usual source of health care in 1996 and about 12% of families reported barriers to receiving needed health services.</li> <li>\$ In 1996, 77.5% of children with a usual source of health care had at least one ambulatory visit, compared to 43.3% those without a usual source of care.</li> <li>\$ Indicative of higher health care utilization rates during the last months of life, the average number of ambulatory visits for persons who died is about 2.5 higher than the rest of the population.</li> <li>\$ Only 43.2% of the population received dental care in 1996.</li> </ul>
<p>MEPS Insurance Component</p>	<p>Data is available for 1996 through 1998</p> <p><b>Key Findings</b></p> <ul style="list-style-type: none"> <li>\$ The average health insurance premium in 1996 was \$1,997 for single coverage and \$4,953 for a family ; in 1998 the single premium was \$2,174 and the family premium was \$5,590.</li> <li>\$ Nationwide, the employee contribution rate has not changed significantly from 1996 through 1998. Employers continue to share premium costs with their employees at the same level.</li> <li>\$ In every State, establishments in large firms were more likely to offer health insurance than those in small firms. Differences in offer rates between States are driven primarily by the small firms in those States.</li> <li>\$ Establishments in Alaska, Idaho, Wyoming, Arkansas, Mississippi, Oklahoma, Nebraska, Louisiana, New Mexico and Texas were less likely to offer insurance to their employees.</li> <li>\$ Approximately 68% of establishments in the nation that offer insurance, offer only one plan. Establishments in California and Hawaii are most likely to offer workers a choice of plans.</li> <li>\$ Conventional indemnity plans are most common in Wyoming, Alaska and Idaho</li> <li>\$ 21.8% of all establishments that offered health insurance offered their employees a choice of plans.</li> <li>\$ Smaller firms are less likely to offer health insurance to their employees, but there are significant variations from State to State.</li> <li>\$ Data is now used in calculation of Gross Domestic Product</li> </ul>
<p>MEPS Resource Center</p> <p>MEPS Workshops</p>	<p>National and State estimates of health insurance costs and characteristics such</p> <p>Beginning in 2000, MEPS data not available for broad public distribution is available to researchers and others with approved projects on site at AHRQ. Data is used in a tightly controlled, supervised environment. Permits more use of the data by a broad range of users.</p> <p>Since 1999, MEPS staff have provided training in how to use this data to nearly 300 researchers and policy makers. These sessions have ranged from 3 hour seminar style presentations to 2 day hands-on practical learning situations.</p>

<b>Product</b>	<b>Significance</b>
	While most of these seminars have been in the Washington DC metro area, we have also conducted workshops in Georgia, Massachusetts, California and Illinois.

### **Funding History**

Funding for the MEPS program during the last five years has been as follows:

	<u>Budget Authority</u>	<u>PHS Evaluation Funds</u>	<u>Total</u>
1999 Actual.....	—	\$29,300,000	\$29,300,000
2000 Actual.....	—	\$36,000,000	\$36,000,000
2001 Actual.....	—	\$40,850,000	\$40,850,000
2002 Current Estimate	—	\$48,500,000	\$48,500,000
2003 Request.....	—	\$53,300,000	\$53,300,000

### **Rationale for the FY 2003 Request**

The FY 2003 request for the Medical Expenditure Panel Surveys (MEPS) totals \$53,300,000 in PHS evaluation funds. The total reflects an increase of \$4,800,000 from the FY 2002 level of \$48,500,000. The increase consists of:

- Continuation Costs from Prior Year Enhancements +\$3,800,000
- Enhancements to the MEPS Insurance Component +\$1,000,000

#### *Continuation Costs*

The FY 2003 request for MEPS includes continuing costs of \$3,800,000 for FY 2002 enhancements to the sample size and content of the MEPS Household and Medical Provider Surveys necessary to satisfy the congressional mandate to submit an annual report on national trends in health care quality. It also covers continuing costs for FY2002 MEPS sample size and content enhancements necessary to prepare an annual report on health care disparities. The MEPS Household Component sample size increased from 13,500 households in 2001 with a full calendar year information to 15,000 households in 2002 for an 8 month period. The funding in FY 2003 reflects the first full calendar year of data collection at the 15,000 household level. The funding in FY 2003 also reflects a sample increase in the sample size of the MEPS Medical Provider Survey associated with the 2002 MEPS Household Sample (2,000 additional office-based physicians, 1,000 additional hospital-identified physicians and 1000 additional pharmacies to obtain health care information on MEPS respondents).

The increase in sample size for the MEPS permits more focused analyses of the quality of care received by special populations due to significant improvements in the precision of survey estimates. This modification in concert with the sample enhancements initiated in 2001 significantly enhances AHRQ's capacity to report on the quality of care Americans receive at the national and regional level, in terms of clinical quality, patient satisfaction, access, and health status both in managed care and fee-for-service settings. These funds will permit the continuation of an oversample in MEPS of Asian and Pacific Islanders and individuals with incomes <200% of the poverty level in MEPS. These enhancements, in concert with the existing MEPS capacity to examine differences in the cost, quality and access to care for minorities, ethnic groups and low income individuals, will provide critical data for the National Healthcare Quality Report and the National Healthcare Disparities Report. The funds will also cover additional improvements in the MEPS computer assisted interview programs to support the National Quality Report and the National Disparities Report.

In FY 2003, data collection will be ongoing for the MEPS Household Survey, the MEPS Medical

Provider Survey, and the MEPS Insurance Component, which consists of a sample of establishments linked to the MEPS Household sample and a separate national employer health insurance survey. More specifically, in-person interviews will be conducted with more than 15,000 families to obtain calendar year 2003 health care data. The Medical Provider Survey will consist of interviews with more than 4,000 facilities, 22,000 office-based providers, 11,000 hospital-identified physicians, 800 home health providers and 9,000 pharmacies. In addition, the MEPS Insurance Component will consist of interviews with more than 40,000 employers.

#### *New Enhancements*

An additional \$1.0 million will be allocated for enhancements to the MEPS Insurance Component both in terms of sample size and improvements in the collection of information from employers about health insurance offerings and costs for their employees. The funds will support a 50 percent sample increase in the set of establishments associated with the MEPS household sample and data collection improvements to improve survey response rates. The enhancements will also permit more detailed analyses for population subgroups that include Asian and Pacific Islanders and individuals with incomes <200% of the poverty level.

## Program Support

	2001 Actual	2002 Appropriation	2003 Request	2003 Request +/- 2002 Appropriation
<b>Current Law</b>				
-- BA	\$2,500,000	\$2,600,000	\$0	-\$2,600,000
--PHS Eval	(\$0)	(\$0)	(\$2,700,000)	(-\$2,700,000)
<b>Accrual Costs</b>				
-- BA	\$87,000	\$88,000	\$0	-\$88,000
-- PHS Eval	(\$0)	(\$0)	(\$89,000)	(+ \$89,000)
<b>Proposed Law</b>				
-- BA	\$2,587,000	\$2,688,000	\$0	-\$2,688,000
--PHS Eval	(\$0)	(\$0)	(\$2,789,000)	(+ \$2,789,000)
<b>FTE</b>	22	22	22	0

### **Purpose and Method of Operation**

This activity supports the overall direction and management of the AHRQ. This includes the formulation of policies and program objectives; and administrative management and services activities.

### **Funding History**

Funding for the Program Support during the last five years has been as follows:

	<u>Budget Authority</u>	<u>PHS Evaluation Funds</u>	<u>FTEs</u>
1999.....	2,341,000	---	21
2000.....	2,484,000	---	22
2001Actual – Current Law	2,500,000	---	22
2001Actual – Proposed Law	2,587,000	---	22
2002 Appropriation..	2,600,000	---	22
2002 Current Estimate	2,688,000	---	22
2003 Request – Current Law	---	2,700,000	22
2003 Request – Proposed Law	---	2,789,000	22

### **Rationale for FY 2003 Request**

The FY 2003 request for Program Support increases by \$100,000 over the FY 2002 President's Budget. This increase provides for current services including mandatory increases for the annualization of the FY 2002 pay raise, the FY 2003 pay raise, and inflation.

