AHRQ Annual Report on Research and Financial Management, FY 2002

U.S. Department of Health
and Human Services

Agency for Healthcare
Research and Quality

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U.S. Department of Health and Human Services
Agency for Healthcare Research and Quality
Rockville, Maryland

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Message from the Acting Director

I am pleased to share the Agency for Healthcare Research and Quality's FY 2002 Performance and Accountability Report with you. This annual report conveys the agency's key program and financial management activities and accomplishments, and demonstrates the dedication AHRQ brings to carrying out its mission.

Over the last year, we have upheld the strong tradition of the agency in supporting and conducting innovative and opportune health services research of the highest quality, and our hard work is making a positive difference in the quality of health care services provided in this Nation. Increasingly, health care decisionmakers have come to rely on AHRQ as the lead Federal Agency supporting and conducting research to improve quality, enhance the outcomes and effectiveness of health care services, and identify strategies to improve access, foster appropriate use, and reduce unnecessary expenditures.

AHRQ is the Federal agency leading efforts to help reduce medical errors and promote patient safety. This initiative represents the Federal government's largest single investment to address the estimated 44,000 to 98,000 patient deaths in hospitals related to medical errors each year. Current AHRQ-sponsored research, which is focusing on identifying and implementing practices to reduce errors as well as yielding practical, evidence-based tools and strategies for the health care system, is laying the groundwork to solve this critical health care problem.

Our mission is driven by the needs of users of our research—patients, clinicians, health system leaders, and policymakers. The primary focus of our mission is to ensure that the research we support is translated into practice so it can reduce the gap between what health care services are known to be effective and the everyday health care services people receive. We have many examples of our success in translating research into practice. These examples include many private-sector organizations that are using the findings of AHRQ research to improve the quality of health care in this Nation. Our success is also evident from the 2,500 requests for evidence-based information that we received from Federal, State, and local government officials searching for evidence to inform their decisions.

Simply put, AHRQ's research improves the health care of Americans. As illustrated throughout this report, one of our greatest accomplishments is that the research we support and conduct has had a great impact on public programs, including Medicare and Medicaid. During the past year, we have supported innovative projects from the best and brightest health services researchers, and we have sponsored unique, focused initiatives involving partnership and collaboration with the public- and private-sector organizations that have an impact on how health care is delivered. AHRQ also continues to nurture the field of health services research by supporting the fledgling careers of new investigators and by encouraging the advancement of established researchers.

Looking ahead, I am confident that we will continue our success in translating research into practice, ensuring that our work improves the quality of health care in America. The end result of our research will be the best health care system possible for this Nation, gauged in terms of improved quality of life and patient outcomes, lives saved, and value gained for what we spend.

Carolyn M. Clancy, M.D.
Acting Director
Agency for Healthcare Research and Quality

Message from the Chief Financial Officer

I am proud of the Agency's FY 2002 efforts to develop more efficient and effective ways to fulfill our mission while maintaining and protecting the integrity of the resources entrusted to us. This report highlights our major programmatic and managerial accomplishments, with the focus on addressing the five President's Management Agenda (PMA) initiatives: strategic management of human capital, competitive sourcing, improved financial performance, expanded electronic government, and budget and performance integration.

We initiated many activities in FY 2002 to address the PMA. Our strategic workforce planning included assessing future workload analyses and gaps in work activities; developing competency models to assist in recruitment, selection, development, and performance assessment activities; and developing a multi-year strategy that outlines goals and action plans that focus on how the Agency conducts its work and how well the existing structure, technology, and systems support this work. In addition, through administrative consolidation and management delayering, we reduced the number of supervisors/managers by 20 percent through FY 2002, and additional organizational streamlining is in the planning stages.

In 2002, we began development of an integrated e-Government program with the goal of increasing gains in business performance. Activities centered on establishing the foundation for e-Government implementation and focused first and foremost on developing a comprehensive body of information technology policy. As an active member of the Steering Committee and the Planning and Development Committee, AHRQ is also participating in the development and implementation of the Department's Unified Financial Management System.

In accordance with PART, OMB's Program Assessment Rating Tool for the formal evaluation of Federal programs, we completed comprehensive program assessments of four key Agency programs in FY 2002: the Medical Expenditure Panel Survey (MEPS), the Healthcare Cost and Utilization Project (HCUP), the Consumer Assessment of Health Plans Study (CAHPS), and the grant component of AHRQ's Translation of Research into Practice Program. Our review of these programs provides the basis for the Agency to move forward in more closely linking high quality outcomes with associated program costs, with the ultimate goal being to use the performance data to better inform budget decisions.

Looking forward, we realize that much work remains to meet future financial management and program performance challenges. In the spirit of Secretary Thompson's initiative to make HHS "One Department," we will continue to promote actively a close, collaborative relationship with our program partners, OMB, and the Congress, as well as with our financial services provider, the Program Support Center. I believe this report demonstrates the strides AHRQ has made as we continue to work toward achieving the highest levels of accountability.

Lisa Simpson, M.B., B.Ch.
Chief Financial Officer

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Part 1
AHRQ Activities and Accomplishments, FY 2002

Health Care in America

Over the last century, Americans have experienced unprecedented advances in health care. Average life expectancy has increased by nearly 30 years, and as a nation, we are enjoying healthier and more productive lives. We are moving closer every day in our quest to find new treatments and cures for diseases that affect millions of Americans.

Much of this progress is due to the advances that have emerged from our investments in health care research. These investments have led to a strong foundation of scientific evidence that has been accumulated over time from many sources. These include basic science carried out in laboratories, clinical trials underway in hospitals and other health care settings, and health services research that is conducted by investigators in both clinical and nonclinical settings.

As a result, the health care we receive today may be the most technologically sophisticated and highest quality care in the world. However, as we move ahead in this new century, it has become apparent that the care known to be effective is not always the care we receive. Indeed, all too often health care causes harm. One recent report concluded that tens of thousands die each year from errors in their care. Indeed, medical errors could be among the top 10 causes of death in the United States.

Addressing Health Care Challenges

Today, we are experiencing an unprecedented volume and pace of change in the U.S. health care system. These changes are not occurring uniformly across the country, and they affect different population groups in different ways.

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 recently reported that “between the health care we have and the care we could have lies not just a gap but a chasm.”

The urgency for addressing the issues underlying this chasm has increased as a result of events that occurred in the aftermath of September 11. We must find ways to respond quickly and efficiently to threats of bioterrorism and other public health emergencies.

Moving Ahead in a New Century

In this first decade of the 21st century, we continue to search for answers to questions about patient safety and medical errors, escalating health care costs, a vulnerable population of uninsured Americans, problems in accessing care, and disparities in care and outcomes that are related not only to insurance, but also to race, sex, age, health status, and geographic location.

Over the last quarter of the 20th century, health care in the United States began to move away from a disease-centered model toward a patient-centered model, in which patients and consumers have more information about their diseases and treatment options and play a more active role in their own care. Yet, patients do not always have the tools and information they need to help them decide among treatment options. Likewise, consumers and patients need information to help them choose high quality care, compare health plans, and avoid medical errors.

Research to address these and other pressing concerns is central to the mission of the Agency for Healthcare Research and Quality. A key component of the agency's mission is to ensure that the knowledge gained through research is translated into measurable improvements in the health care system. Our most important goal is to work toward high quality, accessible, and affordable health care for all Americans.

John M. Eisenberg, M.D.
1946-2002

John M. Eisenberg, M.D., M.B.A., was Director of the Agency for Healthcare Research and Quality from 1997 until his untimely death March 10, 2002, after a year-long illness caused by a brain tumor.

Dr. Eisenberg's career was dedicated to ensuring that health care is based on a strong foundation of research and that the services provided reflect the needs and perspectives of patients. As AHRQ's Director, he spearheaded Federal efforts to reduce medical errors and improve patient safety.

Before coming to AHRQ, Dr. Eisenberg was Chairman of the Department of Medicine and Physician-in-Chief at Georgetown University. Prior to that, he was Chief of the Division of General Internal Medicine at the University of Pennsylvania.

AHRQ: Working to Improve Health Care in America

AHRQ supports and conducts health services research on health care quality, patient safety, access to care, medical effectiveness, the costs of care and how we pay for care, and many other issues that are crucial to the future health and well being of the American people.

This report presents information on the programs and activities undertaken by AHRQ in FY 2002. It includes examples of some recent accomplishments and a description of the research priorities that will shape our activities in the months ahead. To set the stage for this discussion, the report describes AHRQ's organizational structure and the key responsibilities of functional components (see appendixes A and B), discusses the role of the agency's National Advisory Council (see appendix C), and identifies the various audiences and customers who use and depend on the findings from agency-supported research.

Findings from AHRQ's Medical Expenditure Panel Survey (MEPS) and Healthcare Cost and Utilization Project (HCUP), as well as other sources, provide a snapshot of health care in America today. For example:

Health Care Costs and Sources of Payment

- According to the MEPS, health care expenditures for the community (noninstitutionalized) population in the United States accounted for nearly $600 billion in 1999.
- Just 1 percent of America's community population accounted for 27 percent of all U.S. health care expenditures in 1996. This concentration of expenditures was remarkably consistent with the distributions observed in both 1977 and 1987.
- Approximately 84 percent of the U.S. community population has at least some medical expenses during a year. In 1999, the average expense per person for those individuals was just under $2,600, up from $2,444 in 1998.
- Overall, most expenses for the community population are covered by private insurance. In 1999, for example, about 40 percent of all expenditures for people living in the community were paid by private insurance.
- Approximately one-fifth of expenses for the community population are paid out of pocket. In 1999, for example, about 19 percent of all expenditures for this population were paid out of pocket, 23 percent were paid by Medicare, and 9 percent were paid by Medicaid.
- In 1999, only 56 percent of the uninsured community population had any medical expenses, compared with 87 percent for those with private insurance. Medical expenditures for the uninsured are largely, but not exclusively, paid out of pocket.

Health Insurance

- In 2001, 18.8 percent of the U.S. population under age 65 were uninsured, and 12.1 percent had public coverage only.
- Hispanics under age 65 were more likely than people of other races to be uninsured in 2001. Nearly 38 percent of Hispanics lacked either public or private insurance in 2001, compared with 20.2 percent of blacks and 14.9 percent of whites.
- There was a difference between people under age 65 who were employed (17.7 percent) and those who were not employed (28.0 percent) in lack of health insurance in 2001.

- Because part-time workers are less likely to be offered employment-related health insurance, they are much more likely than full-time workers to be uninsured. From 1996 to 2001, part-time workers were about 8 to 10 percentage points more likely to be uninsured than full-time workers.

Health Status

- Among Americans aged 18 and older in 2000, 23 percent said they have high blood pressure; 10.3 percent reported that they have heart disease; 9.1 percent reported that they have asthma; and 6.2 percent said they have diabetes.
- Both Hispanics and blacks aged 18 and older were more likely than whites and people of other races to report having diabetes.
- Heart attack and hardening of the arteries of the heart were among the top 10 diagnoses for both male and nonobstetric female hospital discharges in 2000.
- Hospital discharges for mood disorders (primarily depression) have risen steadily, from 485,000 in 1993 to 664,000 in 2000, an increase of over 35 percent.
- Among both men and women aged 18 to 64 who were hospitalized in 2000, obesity was a coexisting medical condition that could have complicated the care they received in the hospital, which may lead to longer stays and worse outcomes.
- Depression was the most common reason for nonobstetric hospital stays among women aged 18 to 44 in 2000.
- About 4.4 million hospital discharges in 2000 were related to obstetric conditions.

Use of Health Care

- In 2000, 72.3 percent (145.5 million) of the U.S. population aged 18 and older had visited a doctor or medical clinic in the previous 12 months.
- In 2000, nearly 97 percent of people 18 and older who reported having a stroke reported having their blood pressure checked in the past year, and close to 60 percent were told to moderate their diet or increase their level of physical activity. Stroke survivors aged 18-64 were less likely than those 65 and older to report having a routine check-up within the past 12 months.Control of blood pressure is essential to decreasing the recurrence of stroke.
- Trend data show that patients hospitalized in 2000 spent nearly 20 percent less time in hospitals, on average, than patients in 1993. Despite decreased use of the hospital, however, hospital costs now are the most rapidly rising component of health care expenditures. Go to www.hschange.org for more information.

- Pregnancy and childbirth account for nearly one of every four hospital stays for women.
- Diseases of the circulatory system (e.g., heart disease) were the most common reason for hospitalization for both men and women (excluding obstetric conditions) in 2000, followed by diseases of the respiratory, digestive, and musculoskeletal systems.

Access to Care

- In 2000, 34.4 percent of the U.S. civilian community population aged 18 or older reported that they had an illness or injury for which they needed medical care right away. Just over half of those saying they needed urgent care said they always received care as soon as they wanted
- Among people 18-64 years of age, whites were more likely than Hispanics to say they needed urgent care (34.7 percent and 29.1 percent, respectively). Among those needing care, whites were more likely than Hispanics to say they always received care as soon as they wanted
- Among people 18-64 years of age, the uninsured were more likely than those with insurance to report sometimes or never receiving urgent care as soon as they wanted (uninsured, 28.6 percent; public insurance, 19.1 percent; and any type of private insurance, 16.1 percent).

Health Care Disparities

- Among people aged 18-64 receiving care in 2000, those with private insurance (84.5 percent) were more likely to say that they did not have problems in getting needed care, compared with those who had only public coverage (71.5 percent) and the uninsured (72.9 percent).
- Among people visiting a doctor or medical clinic in 2000, blacks (64.4 percent) were more likely than whites (58.6 percent) or Hispanics (53.1 percent) to say their providers always explained things in a way they could understand.
- The proportion of hospital stays involving cardiac bypass surgery is over 50 percent higher for men than for women. Also, women are 12 percent less likely than men to undergo diagnostic cardiac catheterization or coronary arteriography while in the hospital following a heart attack.

Role and Mission of the Agency for Healthcare Research and Quality

The mission of the Agency for Healthcare Research and quality is to improve the quality, safety, and efficiency of health care for all Americans through research and partnerships. As the Nation's lead Federal agency for research on health care quality, costs, outcomes, and patient safety, AHRQ develops the evidence about what works in health care practice that enables providers, patients and consumers, system managers, purchasers, and policymakers to obtain real value for their health care dollar. For more information about AHRQ's organizational structure, see appendixes A and B at the back of this report.

The data gathered for AHRQ-funded health services research come from:

- People receiving the care and the clinicians and systems providing the care.
- Employees enrolled in health plans (to help measure and improve patients' experiences with care).
- Hospital records and administrative data provided by States working together to obtain detailed information about the health care people receive.
- Clinicians who meticulously examine and evaluate hundreds of research articles to synthesize the information for providers and patients. The results enhance access to relevant evidence for making effective clinical decisions.

AHRQ at a Glance

Budget:	$298.73 million in FY 2002
Staff:	282 (onboard; limit 294)
Director:	John M. Eisenberg, M.D., M.B.A. (Died March 10, 2002) Carolyn Clancy, M.D., Acting Director
Deputy Director:	Lisa Simpson, M.B., B.Ch., M.P.H.

Health services research completes the work begun in the laboratory. Health services researchers strive to answer the central question: "Does this work in daily practice with real people whose characteristics, needs, and local communities are different?"

Health care in America is changing rapidly. These changes are occurring in the way we organize and pay for care and in the characteristics and health care needs of the U.S. population. Each year, many new health care services and sophisticated technologies become available. This ever-changing health care landscape underscores the importance of high-quality health services research.

The Agency for Healthcare Research and Quality advances private and public efforts to improve the quality, safety, and efficiency of health care. AHRQ supports research that addresses concerns of very high public priority, such as health disparities, safe and effective use of drugs and other therapeutics, primary care practice, and integrated health care delivery systems. In addition, AHRQ supports projects that test and evaluate successful ways to translate research into practice to improve care for patients in diverse health care settings; Evidence-based Practice centers that review and synthesize scientific evidence for conditions that are costly, common, or important to the Medicare or Medicaid programs; and translates the recommendations of the U.S. Preventive Services Task Force into resources for clinicians, patients, and health care systems.

What is health services research?

Health services research examines how people get access to health care, how much care costs, and what happens to patients as a result of the care they receive. The principal goals of health services research are to identify the most effective ways to organize, manage, finance, and deliver high quality care, reduce medical errors, and improve patient safety.

AHRQ's Customers

AHRQ's customers are decisionmakers who need objective, evidence-based, and timely information to make informed choices about the health care they provide, receive, and purchase. These customers include clinical decisionmakers, health care system decisionmakers, policymakers, and patients.

AHRQ supports and conducts health services research on:

- Outcomes
- Costs of care
- Quality of care
- Use of services
- Patient safety
- Access to care

- **Clinical Decisionmakers.** The evidence uncovered through AHRQ-sponsored research and tools developed from those findings help clinicians, consumers, patients, and health care institutions make informed choices about which treatments work, for whom, when, and at what cost.
- **Health Care System Decisionmakers.** Health plan and health care system managers use the findings and tools developed through AHRQ-sponsored research to make choices on how to improve the health care system's ability to increase access to care

and deliver high-quality, high-value care. Purchasers use the products of AHRQ-sponsored research to obtain high-quality health care services.

- **Policymakers.** Public- and private-sector policymakers use the information produced by AHRQ to expand their ability to monitor and evaluate the impact of system changes on outcomes, quality, access, cost, and use of health care and to devise policies designed to improve the performance of the system.
- **Patients/Consumers.** AHRQ's research findings provide patients and families with objective information on how to choose health plans, doctors, or hospitals based on their performance. Consumer materials, including personal health guides, help patients navigate the health care system and get the best and safest care possible.

How AHRQ's Research Helps People

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

Policymakers Use AHRQ's Research in Many Ways

In FY 2002, AHRQ responded to thousands of 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.

AHRQ uses a number of approaches in responding to these requests, including:

- Rigorous analyses of the scientific and medical literature.
- Short-term research on the impact of past policy interventions at the Federal and State levels.
- Simulations of the potential impacts of new policy options.
- Customer-driven workshops on topics that include ways to improve care delivered to people served by public programs and strategies to reduce health care disparities.
- Other forms of technical assistance.

The following examples represent selected instances in which AHRQ's tools and research have been used by policymakers to improve the functioning of the entire U.S. health care system.

Online resources for research and policymaking. AHRQ has made available three online resources that provide invaluable data and statistics for use by policymakers, researchers, and others.

1. MEPSnet is a collection of analytical tools that operate on data from the Medical Expenditure Panel Survey (MEPS). MEPSnet is free and publicly available on the AHRQ Web site. MEPSnet/IC (Insurance Component) has been used to help policymakers at the State level produce reports for legislators and governors on the status of employer-sponsored health insurance in their State. It also has been used to generate cost estimates and otherwise inform new health insurance proposals in States and to track the effects of past changes in State health insurance policy. MEPSnet/HC (Household Component) has been used to answer questions about health care use and spending among various population groups, health insurance coverage and who is uninsured, and how health care use varies by type of health insurance. Go to www.meps.ahrq.gov/MEPSNet.htm/ to access this resource.
2. HCUPnet is an easy-to-use online tool (www.ahrq.gov/data/hcup/hcupnet.htm) that permits easy access to statistics and trends about hospital stays for the Nation as a whole, as well as for selected States. Users can select specific conditions or procedures of interest, rank order conditions or procedures (according to length of stay, total charges, or death rates), or examine all discharges in general. Users also can compare types of patients (by age, sex, primary payer, and/or income) and types of hospitals (by ownership, teaching status, location, bedsize, and/or region).
3. HIVnet presents selected statistics (such as type of insurance coverage) based on medical resource use data collected by the HIV Research Network, a group of 18 large medical practices treating over 14,000 people with HIV disease. HIVnet provides information on inpatient and outpatient use of services and is focused on health services delivery. It provides easy access to selected data for use by service providers, those who plan resource allocation, policymakers, and health services researchers. HIVnet is cosponsored by AHRQ and three other HHS agencies. Go to www.ahrq.gov/data/HIVnet.htm to access HIVnet. HIVnet is a collaborative project between AHRQ and other components of the Department of Health and Human Services. Through HIVnet, AHRQ and the Department's Assistant Secretary for Policy and Evaluation (ASPE), the Substance Abuse and Metal Health Services Administration (SAMHSA), the Health Resources and Services Administration (HRSA), and the National Institute of Health's Office of AIDS Research work closely together on this project.

Anticoagulation therapy for Medicare patients. Based on findings from AHRQ's research, Medicare's Peer Review Organizations (now called Quality Improvement Organizations, QIOs) have implemented 73 projects in 42 States to increase anticoagulation therapy for Medicare beneficiaries who have suffered a stroke. The percentage of Medicare patients discharged from the hospital on anticoagulation therapy has increased from 58.4 to 71.1 percent. The Centers for Medicare & Medicaid Services (CMS) estimates that as of spring 2002, this intervention had prevented up to 1,300 strokes.

Making coverage decisions. AHRQ's state-of-the-art assessments of the effectiveness of clinical services and technologies assist policymakers in making health insurance coverage decisions. For example, a technology assessment produced by an AHRQ-supported Evidence-based Practice Center (EPC) helped inform CMS's February 2002 decision regarding Medicare coverage of positron emission tomography (PET) for patients with breast cancer. Specifically, CMS announced it would revise its Medicare coverage issues manual to include coverage of PET as an adjunct to standard imaging modalities for two types of patients: one, staging patients with distant metastasis or restaging patients with locoregional recurrence of metastasis and two, monitoring tumor response to treatment in women with locally advanced and metastatic breast cancer.

AHRQ's Research Findings Help Clinicians and Patients

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. These wasted opportunities result in the underuse of effective interventions, continued reliance on outmoded approaches to patient care, and inappropriate use of new and often more expensive interventions. A critical portion of AHRQ's mission is to develop useful information for clinicians and patients – and to assure that it is broadly accessible.

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 objective 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 these services are delivered. AHRQ's research ultimately assures that patients and society reap the full rewards of basic research and biomedical innovation.

The following examples illustrate how AHRQ-sponsored research has helped clinicians and patients make informed, evidence-based health care decisions.

- **Computerized diagnostic tools help ED clinicians make important treatment and triage decisions.** Two computerized diagnostic aids are helping emergency department staff make faster and more appropriate decisions about care for the 6 million people with chest pain who go to hospital emergency departments each year. These tools also may lead to lower health care costs for these patients. The Acute Cardiac Ischemia Time-Insensitive Predictive Instrument (ACI-TIPI) and the related Thrombolytic Predictive Instrument (TPI) are programmed into conventional computerized electrocardiographs (ECGs), which automatically compute and print out a patient's predicted outcomes based on characteristics of the ECG when the patient arrives at the ED. The ACI-TIPI predicts a patient's probability of heart attack based on seven risk factors that range from pain in the chest or left arm to peaking or inversion of ECG T waves. The TPI, based on records from 13 major clinical trials and registries, is used to calculate 30-day and 1-year mortality and cardiac arrest probability within 48 hours with and without thrombolytic (clot-busting) therapy. Both instruments were developed, tested, and refined by researchers at Boston University with AHRQ support. Use of ACI-TIPI in a 10-hospital trial led to a decline from 15 to 12 percent in coronary care unit (CCU) admission rates and an increase from 49 to 52 percent in discharges to home among patients without cardiac ischemia. Appropriate hospitalization and CCU admission remained about the same for patients with AMI or unstable angina. If these results were reproduced nationally, it is estimated that use of the ACI-TIPI could result in savings of $728 million by avoiding unnecessary CCU admissions and hospitalizations.

- **Tool helps determine treatment preferences.** The shift toward patient-centered care has meant that a broader range of outcomes from the patient's perspective needs to be measured in order to understand the true benefits and risks of health care interventions. A tool developed through AHRQ research has helped patients with cataracts and their clinicians make important treatment decisions. The Visual Function-14 Index (VF-14) helps patients and physicians assess the need for and outcome of cataract surgery. It supplements the standard eye chart and other clinical measures. The VF-14 measures the degree of difficulty patients have in performing 14 vision-dependent everyday activities, such as driving and reading small print. Many insurers (including Medicare) now require that the results of the VF-14 be reported as a condition of claims payment, and it has been adapted for use in at least a dozen other countries.

- **ER nurses ability to recognize risk of suicide in children.** AHRQ-supported researchers found that after attending educational sessions on psychiatric issues and learning about the Suicide Risk Questionnaire, nurses were better equipped to manage potentially suicidal children in the hospital emergency department. Four simple questions based on a standard 30-item Suicide Ideation Questionnaire helped the ER triage nurses identify 98 percent of children at risk of suicide.

- **Pain scale can be used in nursing homes.** AHRQ researchers have developed a new pain scale that can help identify untreated pain in nursing home residents. The researchers found that more than two-thirds of nursing home residents reported being in pain. One-fourth of the residents reported their pain as "horrible." The researchers developed a Minimum Data Set (MDS) Pain Scale, which is similar to the Visual Analog Scale (the gold standard for assessing pain) but easier to administer. The scale is intended for use with routinely collected nursing home data to help indicate the presence and intensity of residents' pain.
- **Outpatient treatment of women with PID produces similar outcomes to hospital care and is much less expensive.** Women who have mild to moderate pelvic inflammatory disease (PID) who are treated as outpatients have recovery and reproductive outcomes similar to those of women treated in hospitals, according to a recent AHRQ study. If left untreated, PID can result in chronic pelvic pain, infertility, and ectopic pregnancy. The PID Evaluation and Clinical Health (PEACH) study was a randomized clinical trial that compared the effectiveness of inpatient and outpatient treatment strategies in preserving fertility and preventing PID recurrence, chronic pelvic pain, and ectopic pregnancy for women with mild to moderate PID. Women treated as outpatients received a single injection of cefoxitin and an oral dose of probenecid, followed by a 14-day supply of oral doxycycline. Those treated in a hospital were given multiple intravenous doses of cefoxitin plus doxycycline during a minimum inpatient stay of 48 hours. The women's care was followed for 35 months to document long-term outcomes. The short-term clinical improvements were similar for women treated in inpatient and outpatient settings. After 35 months of followup, pregnancy rates were nearly equal between the groups, as was the amount of time it took to become pregnant. There also were no statistically significant differences between the proportion of women with ectopic pregnancy, chronic pelvic pain, or PID recurrence. It is estimated that approximately 85,000 women with mild or moderate PID currently are being hospitalized. Treating these women as outpatients would cause less disruption to their lives and could save as much as $500 million each year.

AHRQ's Research Findings Help Health Systems Managers, Consumers, and Purchasers of Care

AHRQ, in conjunction with both public- and private-sector partners, supports a variety of projects to enhance quality and inform health care decisionmaking by consumers, purchasers, payers, and health care systems managers. For example:

AHRQ's CAHPS® helps patients choose health plans and obtain good health care. Consumers can now access comparative information about health plans based on other consumers' experiences with the health care they received from plans and providers. This information is available through CAHPS, a survey sponsored by AHRQ and the Centers for Medicare & Medicaid Services. CAHPS results can help to inform consumers about their choices among health care plans and allow health plans, employers, and others to obtain consumers' views of the care they are receiving. CAHPS users include purchasers (employers, Federal agencies, State Medicaid programs, and other groups), quality measurement organizations (for example, accrediting organizations and State associations of HMOs), and health plans. The surveys are in the public domain and are available free of charge from the AHRQ Web site (www.ahrq.gov).

Improving the system for delivery of emergency medical services for children. As a result of a clinical trial sponsored by AHRQ and the Health Resources and Services Administration's Maternal and Child Health Bureau, the Los Angeles and Orange County EMS ordered their paramedics to begin using bag-valve-mask ventilation alone on children needing artificial respiration. The researchers found that bag-valve-mask ventilation had comparable survival rates for young children who have stopped breathing without the risk of an intubation procedure. Based on the results of this study, the American Academy of Pediatrics modeled their Pediatric Education for Prehospital Professionals (PEPP) program to encourage the appropriate use of this technique.

Helping employers and other purchasers of health care evaluate their efforts to improve quality. As purchasers of much of the health care in the United States, employers could be a powerful force in closing the gap between the quality of care that we have and the quality of care that we should have. Although many employers are developing strategies to improve health care quality, there is little evidence on the impact of such efforts. Prompted by feedback from the employer community, AHRQ has published *Evaluating the Impact of Value-Based Purchasing Initiatives*. This new tool combines the formality of scientific research principles with real world examples and illustrations. It can be used by employers and other purchasers of health care to evaluate their efforts to measure, monitor, and improve the quality they are receiving for the health care dollars they spend.

AHRQ's Research Portfolio

The Agency's research agenda is user- or customer-driven; that is, the needs of AHRQ's customers determine our research priorities and are pivotal to our success. We ask for and receive input from our customers through various means, including: the National Advisory Council, meetings with stakeholder groups, Federal Register notices, and through comments submitted by the public via the Agency's Web site (www.ahrq.gov).

The Agency carries out a variety of activities to accomplish its research mission. Together, these activities build the infrastructure, tools, and knowledge for measurable improvements in America's health care system. Researchers—including grantees, contractors, and intramural investigators——build on the foundation laid by biomedical researchers who have determined which interventions can work under ideal circumstances. But knowing that these interventions work is only a first step. We also need to know in which circumstances they work, for whom they work and don't work, and other critical information to make sure that the interventions are used correctly to improve patients' health and that they are effective in everyday practice.

Opportunities for Research

Talented and imaginative health services researchers are a critical component of our work at AHRQ. They are essential to our ability to pursue and fulfill the agency's mission. These researchers are dedicated to excellence in their own work, and they collaborate with other researchers and health care decisionmakers so they can address relevant research questions and ensure that the findings are translated as improvements in health care. In addition to the researchers on AHRQ's staff, about three-quarters of the Agency's budget is awarded as grants and contracts to support the work of researchers at universities, in clinical settings such as hospitals and doctor's offices, and in health care organizations. See appendix D for more information on AHRQ's research cycle.

Unique AHRQ Research Investments

In FY 2002, quality of care, practice-based research, disparities, and research on pharmaceuticals and other therapeutics were priorities for new research. AHRQ issued solicitations in these and several other areas, as follows:

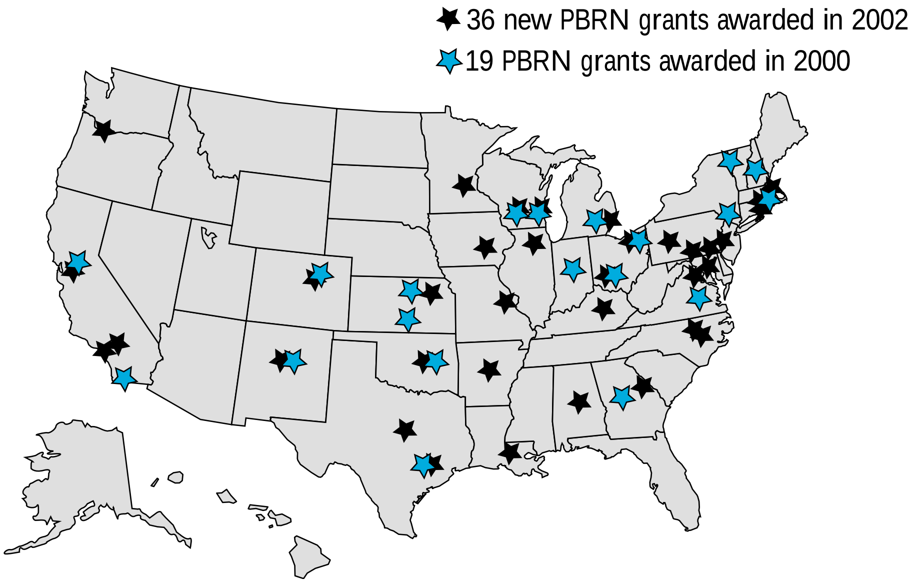
- **Partnerships for Quality.** This initiative is designed to accelerate the pace with which research findings are translated into improved quality of care and the health care system's ability to deliver care. The goal is to support models or prototypes of change led by organizations or groups with the immediate capacity to influence the organization and delivery of health care, as well as measure and evaluate the impact of their improvement efforts. In FY 2002, 24 partnership grants totaling $2.357 million were funded under this announcement.

- **National Research Service Awards. Institutional Training Grants.** Believing that tomorrow's health care quality is achieved through an investment in educational excellence today, AHRQ is firmly committed to building a strong, visible infrastructure for the conduct of future health services research through support of a network of NRSA institutional training programs located throughout the country. Funds are provided to support approximately 150 clinical and nonclinical predoctoral and postdoctoral students annually in order to equip them with the necessary knowledge, skills, and experiences to conduct health services research that will meet the needs of patients, providers, plans, purchasers, and policymakers. The awards allow scholars to

gain the necessary methodological and substantive multidisciplinary expertise required to address critical issues facing the Nation's health care system, including patient safety and the delivery of cost-effective care.

- **Primary Care Practice-Based Research Networks.** The goal of these developmental/exploratory grants is to assist new or established primary care practice-based research networks (PBRNs) to enhance their capacity to conduct research and translate research findings into practice. A PBRN is a group of ambulatory practices devoted principally to providing primary care to patients that are affiliated with each other (and often with an academic or professional organization) in order to investigate questions related to community-based practice. AHRQ funded 36 PBRNs in FY 2002, totaling over $3 million in the first year and $6 million over 3 years. Although headquartered in 25 States, the networks receiving grants include primary care practices in all 50 States and the District of Columbia. Many of the practices serve minority and low-income patients, as well as patients in underserved rural and urban locations.

Practice-Based research Networks (PBRNs)



- **Changing Practices, Changing Lives.** This announcement was issued by AHRQ in partnership with the Bureau of Primary Health Care, Health Resources and Services Administration (HRSA) to support assessments of the HRSA-sponsored Health Disparities Collaboratives, which were initiated in 1998 and represent a major sustained effort to enhance the quality of care provided through HRSA's community health centers and ultimately improve the outcomes of underserved people. The results of this initiative will assure that newly established Community Health Centers can incorporate successful components of programs to improve quality and reduce disparities in health care from the outset. AHRQ and HRSA funded two projects in FY 2002 totaling $1.24 million as a result of this announcement.

- **Rewarding Results**. This announcement provided support for a comprehensive evaluation and analysis of demonstration projects supported under the “Rewarding Results” initiative, which is being funded by AHRQ, the Robert Wood Johnson Foundation, and several other funding and technical assistance partners. The program is intended to develop, evaluate, and translate innovations in systems of provider payments and nonfinancial incentives that encourage and reward high-quality care.

Examples of Current Projects

The following summaries are representative of projects funded in FY 2002 that are focused on well-defined research areas or topics.

- **Closing the Gap: Partnering for Change.** The ACP-ASIM, the national organization for 100,000 of the nation’s internists, is leading a project to test a team-oriented, multifaceted continuing education intervention strategy that will target improvements in care for patients with type 2 diabetes. The project includes 34 large, multiphysician internal medicine practices in two States. The project involves national medical and nursing societies, health plans, volunteer organizations, and other key stakeholders, as well as physicians, nurses, and administrators who interact directly with patients in the practices.
- **Outcomes, Incentives, and Improvements in Collaboratives.** In 1998, the Health Resources and Services Administration began a major 6-year effort designed to reduce health disparities and improve the quality of care in health centers. This project involves 200 health centers in the Midwest and West Central regions of the country. The goals are to (1) determine if the Health Disparities Collaboratives (HDCs) have improved quality and reduced disparities in the care and outcomes of patients over the 6-year span of the initiative; (2) identify ways to enhance the effectiveness, sustainability, and spread of the HDCs; and (3) evaluate the costs and cost-effectiveness of the HDCs to determine whether they are financially viable from health center and societal perspectives.

Innovative Research: Addressing Current and Emerging Challenges

The topics addressed by innovative research proposals reflect timely issues and ideas from the top health services researchers. Forty percent of the large grants and cooperative agreements funded by AHRQ in FY 2002 were initiated by individual investigators who developed research proposals within an area of interest to the Agency.

A program announcement (PA) is a formal statement that clarifies priorities and encourages applications on new research topics.

FY 2002 Program Priorities

- **Translating Research into Practice.** Projects funded under this PA, which was issued jointly by AHRQ, the Department of Veterans Affairs, and the National Institutes of Health, are conducting innovative and rigorous research and evaluation projects related to the translation of research findings into measurable improvements in quality, patient safety, health care outcomes, and costs, use of services, and access to care. Two specific priorities are to: one, compare the use of interventions to translate research into practice across different health care systems; and two, measure the impact of translation activities, including the testing of interventions that foster measurable and sustainable improvements in quality and safety or consistent quality and patient safety at a lower cost.

- **Patient-Centered Care: Customizing Care to Meet Patients' Needs.** These projects focus on design and evaluation of care processes to empower patients, improve patient-provider interaction, help patients and clinicians navigate through complicated health care systems, and improve access, quality, and outcomes.
- **Impact of Payment and Organization on Cost, Quality, and Equity.** Many health care leaders have concluded that the chasm between the level of quality that could be provided and that which is provided to most people is attributable to a lack of incentives and rewards, as well as inattention to organizational factors that make doing the right thing the easy thing to do. These projects focus on the effects of payment and organizational structures and processes on the cost, quality, and equity of health care.

Selected Examples of Recently Funded Projects

- **Applied Regionalization of Emergency Care.** These University of Pennsylvania researchers are developing an innovative mathematical tool to guide health planners in maximizing access to their State's emergency medical services systems. They will build on a related tool, the Trauma Resource Allocation Model for Ambulances and Hospitals (TRAMAH), which was developed with support from AHRQ. TRAMAH can be used to locate both trauma centers and helicopter depots for State trauma care systems. This new project will augment TRAMAH by adding hospital volume constraints. The researchers will apply the new model to 12 State trauma care systems and compare the States with each other to assess the model's flexibility as a tool for future trauma systems planning and evaluation. Based on the remote geography and general lack of access to trauma centers, the new model will greatly benefit rural and frontier areas by creating more efficient trauma care systems.
- **Impact of Risk Talks on Patient Colorectal Screening.** These researchers are testing the usefulness of a physician or staff-initiated discussion of personalized patient risk information for cancer on patient compliance for colorectal cancer screening (fecal occult blood test, FOBT; sigmoidoscopy or colonoscopy, if indicated) within 3 months of intervention. This project will be implemented in Arizona's most populous county within the indigent health care system to reach a high proportion of underserved, often minority, patients.

- **Vaginal Birth After Cesarean Section: Linking Hospital and Clinical Factors to Outcomes.** VBAC is a common indicator used to monitor maternal health care quality and hospital performance. There is marked variation in VBAC rates, yet little is known about the specific hospital organizational factors and clinical factors associated with labor and delivery that contribute to this variation. These researchers are identifying and characterizing the specific factors associated with safe VBAC rates for both mothers and babies. The goal is to assess the relationship of hospital-specific organizational factors and labor and delivery clinical policies with use of VBAC (primary study outcomes: repeat cesarean, attempted VBAC, and successful VBAC) and with maternal and neonatal outcomes among women with a history of prior cesarean delivering in California hospitals during the study period. The researchers hypothesize that hospital-specific organizational and clinical factors vary among hospitals in California, and that these factors are related to VBAC outcomes. By linking hospital organizational factors and clinical polices to patient outcomes, this information could serve as the basis for the development of evidence-based policy recommendations regarding "best practices" to promote safe VBAC use in different hospital settings.

Building the Research Infrastructure

We continue to benefit from the efforts of a national cadre of well-trained, talented, and energetic health services researchers. One way that AHRQ contributes to excellence in health care delivery is by providing support to maintain and nurture this vital resource.

AHRQ believes that future improvements in health care depend in large part on the investments we make today in the research infrastructure. Training of new investigators is fundamental to producing the next generation of health services researchers. These investments also return a more immediate payoff in the form of high-quality research findings that accrue naturally as a result of the training process. The products and lessons learned from such research are useful to regional, State, and national decisionmakers in assessing the effectiveness of current programs and planning for future policies that address the costs and financing of health care, the use of health care services, and access to care across diverse regions and populations.

The agency supports a variety of training and career development opportunities through individual and institutional grant programs. In FY 2002, AHRQ provided support for 216 trainees and new investigators through these programs:

- Dissertation research support.
- Kerr White Visiting Scholars Program.
- Predoctoral fellowships for minority students.

- National Research Service Awards (pre- and postdoctoral fellowships), including both individual and institutional programs.
- Career development awards (K awards).
- Building Research Infrastructure and Capacity (BRIC) awards.
- Minority Research Infrastructure Support Program (M-RISP) awards.

Investments in Training

The following examples illustrate the types of projects AHRQ has funded under the BRIC and M-RISP initiatives.

BRIC Projects

- **Effects of sleep loss and night work on patient safety.** This project is focused on the impact of sleep deprivation and night work on patient safety. Using comprehensive error-detection methods for the measurement of sleep, the researchers are quantifying the roles of time of day, time on duty, and sleep inertia in the occurrence of medical errors.
- **Doctor-patient communication and antibiotic over-prescribing.** The focus of this project is the role of doctor-parent communication as a determinant of both inappropriate antibiotic prescribing for respiratory infections in children and parents' satisfaction with care. Data have been collected from 38 pediatricians working in 27 clinical sites and from parents whose children have experienced an upper respiratory illness.
- **Quality of diabetes care in the primary care setting.** These researchers are building on previously completed projects that focus on barriers to diabetes care in family physicians' offices to examine the processes and quality of diabetes care within primary care practice.
- **Cost-effectiveness of domestic violence interventions.** This project is focused on domestic violence intervention in primary care practice, including the effectiveness of domestic violence intervention components, cost-benefit analysis, and monitoring of outcomes with a longitudinal cohort study.

M-RISP Projects

- **Center for Minority Health Services Research.** The goal of this project is to establish the Center for Minority Health Services Research at Howard University. The center will significantly expand the health services research and outcomes research capacity of Howard University's Colleges of Pharmacy and Nursing and Allied Health Sciences. A research focus of this M-RISP program will be pharmaceutical outcomes research. One study will assess the usefulness and validity of the Medical Expenditure Panel Survey (MEPS) database in the analysis of HIV diagnosis and treatment data.

- **Minority Elderly Research Center.** The goal of this Shaw University project is to establish the infrastructure to support junior level faculty to conduct health services research on racial disparities among various minority populations, with a focus on the elderly population. For example, one study will assess whether physician workforce transitions affect certain groups of elders by limiting their opportunity to receive continuous primary care over time from the same physician. The project is providing training, resources, and mentoring opportunities through collaborative linkages with senior investigators at other universities.
- **Clinical Faculty Research Training Program.** The goal of this program at Morehouse School of Medicine is to enhance the capacity of individual faculty members to conduct health services research aimed at eliminating racial/ethnic health disparities and improving the quality of health care services for blacks and other vulnerable populations. One study will evaluate the impact of a provider-based intervention on immunization levels among low-income preschool-aged children enrolled in Medicaid.

Please visit the agency's Web site at www.ahrq.gove for more information on all of the Agency's funding opportunities, including an ongoing program announcement that describes the priorities for research and career-related grant programs.

Partnerships and Coordination

The Agency for Healthcare Research and Quality has a long history of developing partnerships and working in collaboration with various HHS organizations, other components of the Federal Government, State and local governments, and private-sector entities. Working in partnership with these other organizations helps us meet our goals.

AHRQ's collaborative activities and partnerships span the spectrum of our activities: development of new knowledge; development of tools, measures, and other decision-support mechanisms so that existing knowledge can be easily used; and working with the public and private sectors to accelerate the adoption of effective health care interventions.

Because our authorizing statute provides the agency with a unique focus on improving the quality of the health care delivery system, AHRQ has developed several initiatives to meet this responsibility. Each of these initiatives places great emphasis on partnerships and collaboration. In FY 1999, AHRQ developed the first of these initiatives, Translating Research into Practice, a targeted research effort designed to assess the effectiveness of different strategies and methods for applying the often technical findings of research in daily practice. This was followed by the establishment of two "real world" research networks—an Integrated Delivery System Research Network and Practice-Based Research Networks—that serve as ongoing, living laboratories, enabling us to quickly assess emerging trends in health care or evaluate the impact of new interventions. With the most recent initiative, Partnerships for Quality, AHRQ is now working with other public- and private-sector entities to use this entire spectrum of research to actually improve care.

There are a variety of ways in which AHRQ works in collaboration and partnership to carry out its mission:

- **Develop new knowledge through research.**
  - AHRQ's focus is developing new knowledge regarding effective health care services and efficient approaches to financing and delivering those services. We co-fund individual research projects with other public- and private-sector funders and sponsor joint research solicitations with other HHS agencies and research foundations. When we co-fund a project supported by other agencies, the goal is to ensure that the research addresses issues of great importance in daily practice, such as the comparative cost-effectiveness of alternative treatments, which would otherwise go unaddressed.
  - In FY 2002, for example, an ongoing partnership between AHRQ, the Health Resources and Services Administration (HRSA), CMS, and the National Institute for Nursing Research resulted in a published study on the relationship between nurse staffing levels and patient outcomes. The researchers found a direct link between nurse staffing levels and patient complications and deaths in hospitals. They demonstrated that low RN staffing is associated with rates of serious complications, such as pneumonia, cardiac arrest, shock, and gastrointestinal bleeding.

- **Develop tools, measures, and other decision-support mechanisms so that existing knowledge can be easily used.**
  - It is becoming increasingly difficult to keep abreast of the burgeoning medical literature, and it is even more challenging to determine how to apply research findings effectively. In response, AHRQ supports the assessment and synthesis of existing scientific knowledge and the development of tools, measures, and decision-support mechanisms to assist physicians, patients, and others in using the evidence on what works best.
  - AHRQ increasingly is being seen as the source of definitive assessments of existing scientific evidence. A growing number of Federal agencies (e.g., the National Institutes of Health, the Centers for Medicare & Medicaid Services, the Social Security Administration, and the Department of Veterans Affairs), professional societies, and other health care providers are working closely with AHRQ's Evidence-based Practice Centers (EPCs) to develop syntheses of

existing scientific evidence to guide their work. For example, NIH has used literature reviews and evidence reports prepared by AHRQ-supported EPCs as the basis for consensus development conferences on several topics, including management of cancer pain, management of hepatitis C, and prevention of antisocial behavior. In addition, CMS uses technology assessments prepared by the EPCs to inform decisions about Medicare coverage of new and existing health technologies.

– Evidence reports prepared by AHRQ-supported EPCs have been used in the development of clinical practice guidelines by a number of private-sector organizations, including the American Psychiatric Association, the American Academy of Pediatrics, the American Heart Association, and many others. For example, the American Academy of Pediatrics has developed a practice guideline based on the AHRQ evidence report on diagnosis of attention-deficit/hyperactivity disorder (ADHD). Also, the Department of Veterans Affairs is using the meta-analysis in our EPC report on prostate cancer as part of its continuing medical education program.

Use of AHRQ Technology Assessments

AHRQ prepares technology assessments for use by the Centers for Medicare & Medicaid Services to inform their coverage decisions for the Medicare program and to provide guidance to Medicare carriers. The following technology assessments were developed by AHRQ in FY 2002:

- Liver transplantation for patients with hepatobiliary malignancies other than hepatocellular carcinoma.
- Positron emission tomography for soft tissue sarcoma.
- Positron emission tomography for thyroid cancer.
- Living donor liver transplantation.

To find these and other technology assessments, go to the AHRQ Web site at www.ahrq.gov and click on “clinical information.” Assessments can be accessed through a full-text link to the CMS Web site.

- **Working with public and private sector efforts to accelerate the adoption of effective health care interventions**.

  – Even when the scientific evidence is clear and clinicians, patients, and others have the tools to use existing knowledge, it may not be used. Findings from

AHRQ-supported TRIP (Translating Research into Practice) research and research conducted through AHRQ's Integrated Delivery System Research Networks (IDSRNs) and Practice-Based Research Networks can help identify the organizational, financial, and cultural barriers to implementation and help assess the effectiveness of alternative approaches to facilitate adoption. The Partnerships for Quality can then use this research to speed the adoption of effective practices and, in turn, further assess and refine these implementation strategies.

- The goal of the Translating Research into Practice cooperative agreements is to identify sustainable and reproducible strategies to overcome the barriers to use of effective health care interventions and interventions that facilitate their adoption. Twenty-seven projects were funded in 1999 and 2000, involving 458 sites (hospitals, physician's offices, nursing homes, Head Start programs, outpatient clinics, and research network practices), more than 150,000 patients/participants, 1,547 physicians, and 4,276 nurses, pharmacists, and other health care providers.
- AHRQ supports nine Integrated Delivery System Research Networks that conduct fast-track, cutting-edge research on health policy and delivery system issues. More than 700,000 physicians, a majority of hospitals, more than 2,000 outpatient clinics, 450 long-term care facilities, 50 rehabilitation facilities, 30 home health agencies, and 60 dental facilities are affiliated with these nine networks.
- The Practice-Based Research Networks (PBRNs) are groups of practices devoted principally to patient care that work together with researchers and/or professional organizations to study and improve the delivery and quality of primary care. With awards made in September, 2002, AHRQ now supports 36 networks involving 10,000 providers, and 10 million patients.
- The Partnerships for Quality funded in FY 2002 are designed to accelerate the pace with which research findings can be translated into improved quality of care and health care system performance. These 22 projects span much of the Nation and involve more than 88,000 medical providers; 5,800 hospitals, nursing homes, and other health care facilities; and 180 health plans.

- **Coordination with other HHS agencies.**
  - In FY 2002, AHRQ continued to play a leadership role in the HHS Patient Safety Task Force, which includes the Centers for Disease Control and Prevention (CDC), the Food and Drug Administration (FDA), and the Centers for Medicare

& Medicaid Services (CMS). The goal is to work closely with the States and the private sector to improve existing systems to collect and analyze patient safety data. AHRQ, on behalf of the Patient Safety Task Force, has awarded a contract to develop and implement a user-friendly, Internet-based patient safety reporting format that will greatly simplify the burden on those required to report patient safety events, enable faster cross-matching and electronic analysis of data, and facilitate more rapid responses to patient safety problems.

Working in partnership:

- AHRQ worked collaboratively with the American Medical Association and the American Association of Health Plans to develop the National Guideline Clearinghouse (NGC™), an internet resource for evidence-based clinical practice guidelines. Currently, the NGC includes more than 1,000 guidelines that have been submitted by over 165 health care organizations and other entities.
- The Healthcare Cost and Utilization Project (HCUP) is a long-standing public-private partnership between AHRQ and more than 29 partner States to build and maintain a multi-State data system.
- AHRQ and the Centers for Medicare & Medicaid Services (CMS) are working together to develop a module of the CAHPS survey that will report consumer satisfaction with regard to hospital care. AHRQ staff are also working to develop messages CMS can use to target information to Medicare beneficiaries.

– AHRQ has been a very active participant in the Research Coordination Council (RCC). We have received valuable input from the RCC workgroups that will help us strengthen coordination and collaboration in several areas of the agency’s research. For example, the Disability, Aging, and Long-Term Care Workgroup made recommendations related to AHRQ’s research agenda on nursing home quality, disability measurement, and efforts to improve the long-term care data infrastructure. The Health Research Workgroup recommendations focused on improved coordination and gaining efficiencies in improving research translation, dissemination, and implementation, as well as gaining efficiencies in improving research translation, dissemination, implementation and better coordination of research related to health care. The Science workgroup recommendations are related to the Secretarial Initiative on Prevention.

Translating Research Into Practice

It may take as long as several decades for findings from original research to be incorporated into routine clinical practice. Thus, the translation of research findings into sustainable improvements in everyday practice and patient outcomes remains one of the most significant challenges to be met in improving the quality of health care. Accelerating the uptake of evidence-based practice is a top priority for AHRQ.

In September 2000, AHRQ funded 13 new projects to evaluate different strategies for translating research findings into clinical practice. The goal of these cooperative agreements is to identify sustainable and reproducible strategies to help accelerate the impact of health services research on direct patient care and improve the outcomes, quality, effectiveness, and efficiency of care through partnerships between health care organizations and researchers.

The projects funded in 2000 joined 14 others that were funded in 1999 as part of a major initiative by AHRQ to close the gap between knowledge and practice to ensure continuing improvements in the quality of the Nation's health care. There now are 458 sites (hospitals, physician's offices, nursing homes, Head Start programs, outpatient clinics, and research network practices) involved in this initiative. There are more than 150,000 patients/participants, 1,547 physicians, and 4,276 nurses, pharmacists, and other health care providers taking part in AHRQ's TRIP-II initiative.

Two areas of particular importance to the TRIP-II initiative are improving the health care provided to priority populations and using information technology to translate research findings into health care improvements and health policy. Collaboration is the key to realizing these goals. A number of partnerships have been formed between researchers and health care organizations such as integrated service delivery systems, practice-based networks, academic health centers, managed care organizations, and others. The structural and organizational diversity of these health systems may help to facilitate the evaluation of models and tools for research translation to actual care settings that might not otherwise occur.

These partnerships are helping to accelerate and magnify the impact of research on health care practice by:

- Disseminating evidence-based knowledge to audiences that include practitioners, patients, and administrators.
- Identifying information important to the efforts of organizations to improve the quality of health care.
- Providing practical assistance to physicians and other providers in implementing research in direct patient care.
- Supporting the further development and refinement of successful and sustainable strategies to translate research into practice that improves outcomes.

Trip-II Partnerships and Collaboration

The following are examples of partnerships formed between AHRQ grantees and other organizations and academic institutions to facilitate adoption of research findings.

- **Asthma management model for Head Start.** Arkansas Children's Hospital, Little Rock. This project involves 29 Head Start programs and focuses on symptoms, quality of life, ER visits, hospital use, and asthma-related school absences. Partners: Pulaski County Head Start and the Arkansas Foundation for Medical Care.
- **Diabetes education.** University of Illinois, Chicago. Researchers are comparing usual care with patient education via an interactive, multimedia computer program to improve diabetes-related knowledge, attitudes, and compliance with self-care recommendations. Partners: Community Health Clinic and the Cook County Hospital Ambulatory Network.
- **Outpatient decision support.** Brigham and Women's Hospital, Boston. This project focuses on physician adherence to paper-based and electronic guidelines, reminders, and alerts for outpatient settings. Target areas are disease management, medication management, and ancillary test ordering. Partners: Beth Israel and Massachusetts General Hospitals and their outpatient clinics.
- **Improving use of ischemic stroke research.** Minneapolis Medical Research Institute. Researchers are working on a model to accelerate the use of evidence-based treatment guidelines for acute ischemic stroke in 24 urban and rural hospitals in Minnesota. Partners: Harvard Medical School and the University of Minnesota School of Nursing.

A steering committee made up of grantees and AHRQ staff is working to strengthen individual studies and facilitate collaboration and synergism between the studies. Several work groups have been formed to discuss common issues, data elements, methods, tools, and outcomes. The goal is to advance the scientific base for clinical research implementation.

Improving Primary Care Through Practice-Based Research

In FY 2002, AHRQ awarded $1.5 million to 18 primary care practice-based research networks (PBRNs). The 18 funded networks directly involved 4,275 primary care providers (family physicians, pediatricians, general internists, and nurse practitioners) whose practices are spread across all 50 States and provide care for about 6.2 million patients. Susequently, in September, 2002, AHRQ made PBRN awards under a new initiative that doubles (to 36) the number of funded networks and greatly increases the number of providers (about 10,000) and patients (about 10 million) who will be affected by AHRQ's efforts.

PBRNs are groups of practices devoted principally to patient care that work together with academic researchers and/or professional organizations to study and improve the delivery and quality of primary care. Through cooperative agreements, AHRQ supported network efforts to define the practice base of each PBRN and to improve network methods of managing data and translating research into practice.

Several of the networks are made up entirely of rural practices. Others, especially those made up of mostly inner-city practices or community health centers, serve large minority and low-income patient populations. In addition to several regional networks, the group included two national networks managed by major primary care professional organizations: the American Academy of Family Physicians and the American Academy of Pediatrics.

In particular, AHRQ wanted to improve in-office systems designed to assure that the primary care delivered in practice is consistent with current medical evidence. In addition to collecting survey data about their provider and patient populations, the networks have tested the use by practitioners of various electronic information technologies, including handheld devices, notebook computers, and Web-based applications. Two networks conducted qualitative studies on patient and provider concerns about the privacy and confidentiality of patient-related data collected in primary care practices.

AHRQ has partnered with the Robert Wood Johnson Foundation in the development of a new PBRN-targeted initiative that will focus on identifying successful methods of promoting healthy behaviors (smoking cessation, avoidance of risky drinking, increased activity, and healthy diets) in primary care practices. The agency also partnered in FY 2002 with the National Cancer Institute in issuing a program announcement supporting research by PBRNs aimed at improving rates of screening for colorectal cancer in primary care practice. We expect the initial awards to PBRNs from both the AHRQ/Robert Wood Johnson Foundation and the AHRQ/National Cancer Institute initiatives will be made in early 2003.

Fast-Track Research Through Integrated Systems

AHRQ's Integrated Delivery System Research Network (IDSRN) facilitates fast-track, cutting-edge research on health policy and delivery system issues. The research is carried out by top scientists in clinical settings and leads to results that are timely and immediately useful. The IDSRN is a creative agency-private-sector partnership that links AHRQ with the Nation's top researchers and some of the largest health care systems in the country. The Network is being tapped for research by a number of AHRQ's sister agencies, including the Centers for Medicare & Medicaid Services (CMS), the Office of Minority Health/Office of the Secretary of Health and Human Services, and the Office of Public Health Preparedness.

The IDSRN includes nine practice-based research consortia and their collaborators, who provide care to more than 55 million Americans across the United States. Many of those who receive care in participating facilities represent hard-to-reach populations, such as those covered by Medicare or Medicaid, those who are uninsured, racial/ethnic minorities, and urban and rural residents.

With access to linked private-sector data about care in ambulatory and inpatient settings, the IDSRN is uniquely situated to develop, disseminate, and implement scientific evidence about what works in a variety of health care settings. The partners and collaborators collect and maintain administrative, claims, encounter, and other health care data on large populations that are clinically, demographically, and geographically diverse. The IDSRN represents a real-world laboratory for organization and system-level demonstrations, and it serves as a dissemination medium for putting evidence-based findings into practice.

The IDSRN was initiated in FY 2000. In its first 3 years of operation, awards totaling more than $11 million have been made to support research on a variety of topics, including patient safety, health care quality, information technology, the organization and financing of care, bioterrorism preparedness, and disparities in health care. Many of the studies include analyses of financial incentives, payment policies, and/or the impact of costs on care.

Network Partners

The IDSRN includes the following nine practice-based research consortia and their collaborators:

- HMO Research Network
- Abt Associates, Inc.
- Center for Health Care Policy and Evaluation (UnitedHealth Group)
- Research Triangle Institute-UNC Network
- Emory Center on Health Outcomes and Quality
- Denver Health
- University of Minnesota Consortium
- Marshfield Medical Research and Education Foundation
- Weill Medical College of Cornell University

Network Participation

Provider type	Number participating in IDSRN
Physicians	More than 700,000
Hospitals	Majority of U.S. acute care facilities
Outpatient clinics	More than 2,000
Long-term care facilities	450
Rehabilitation facilities	50
Home health agencies	30
Dental facilities	60

Findings from IDSRN projects are of interest to a broad range of stakeholders, including policymakers, employers, public purchasers, health information organizations, clinicians, and patients. The network and the pool of providers and patients it represents are key dissemination vehicles for research findings from IDSRN studies. Findings are also disseminated through more traditional channels, such as conferences, Web sites, training programs, press briefings, and fact sheets and other publications.

Examples of recent findings from IDSRN projects include:

- **Guides on Cultural Competency:** AHRQ and CMS cofunded the development of two guides to help Medicare+Choice organizations improve the delivery of culturally competent care. The guides are published on the CMS and AHRQ Web sites, print copies have been sent to CMS's Medicare+Choice organizations, and copies also are available from the AHRQ Clearinghouse. Medicare+Choice organizations are mandated by CMS to implement either clinical or cultural competency interventions, and the majority are expected to opt for a cultural competency intervention using the guides to achieve this goal.
- **Uniform Collection of Race/Ethnicity Data.** Following their study on the impact of race/ethnicity on access, use, and outcomes of health care, Denver Health implemented a new process throughout its health system to collect race/ethnicity information from patients in a uniform manner. This study was cofunded by AHRQ and the Office of Minority Health/Office of the Secretary, U.S. Department of Health and Human Services.
- **Bioterrorism Antibiotic Prophylaxis Model.** Recent bioterrorism events have intensified the need for communities to develop concrete response plans. Weill Medical College of Cornell University produced a simulation model for outpatient antibiotic distribution in the event of a bioterrorist attack. This point-of-dispensing (POD) model

has been used as a template by the Office of Emergency Management and the Department of Health in New York City to set up and run a number of POD sites. For example, Presbyterian Hospital implemented a POD in its hospital cafeteria to brief, triage, and distribute antibiotics as necessary to employees and patients.

- **Tri-POD Drill.** Following the development and use of the POD model described above, the simulation model of mass antibiotic prophylaxis was tested in May 2002 in a large-scale, live exercise in New York City. The drill succeeded in triaging and providing simulated antibiotics to over 1,250 “patients” per hour. The mock patients, who had been trained to present with or without various symptoms of illness, were tracked using bar-code technology that allowed the organizers to measure both processing time and accuracy. Officials hope to use the results of this exercise to develop a template for bioterrorism response that can be adapted by other U.S. cities and around the world.

- **Community Health Access (CHA) Initiative.** Marshfield researchers presented results from their Community Health Access (CHA) Initiative Evaluation to Marshfield Clinic’s President and other senior staff, describing CHA evaluation findings and recommended changes. Following the meeting, Marshfield leadership agreed to extend funding and support to the CHA program for a minimum of an additional year.

Characteristics of IDSRN Facilities

Top study settings

- Outpatient clinics
- Hospitals
- Emergency rooms
- Nursing homes

Top medical conditions

- Diabetes
- Pregnancy, labor, and delivery
- Cardiovascular disease
- Stroke

Top special populations

- People with chronic conditions
- Elderly
- Medicaid/low SES
- Ethnic/racial minorities
- Rural residents

- **Coumadin Clinic Evaluation.** In June 2002, the Director of Marshfield Clinic ProActive Health Department presented findings to senior staff from the recently completed coumadin clinic evaluation conducted at Marshfield Clinic. A central focus was the opportunity to improve anticoagulation management services and reduce adverse health outcomes—primarily hospitalizations—by expanding coumadin clinic services throughout the clinic system. It is expected that anticoagulation management services will be extended systematically to the remainder of the Marshfield Clinic system. Findings from this initiative strongly suggest that disease state management such as this could save Medicare an estimated $236,000 per 100 person years.

- **Reducing Medication Errors.** In a study of integrated delivery system solutions for transferring medication data across patient care settings, Research Triangle Institute developed a model showing that use of an electronic medication list at hospital admission and discharge may reduce by 50 percent the risks and errors associated with poor information transfer. Examples of these risks are medication omissions, wrong doses, and allergic reactions. Providence Hospital in Portland, OR, is using the study findings to reduce medication errors.

Partnerships for Quality

Research and experience have taught us that new scientific knowledge does not automatically translate into practice and improve patient care. In order for research findings to make their way into everyday clinical practice, the new knowledge must be linked with supportive environments and incentives for change. Systematic approaches are required for changes to take place and services to be implemented that have the potential to improve care.

To close the gap between the level of quality that is possible and that which is achieved, AHRQ is supporting a newly funded initiative called Partnerships for Quality (briefly described earlier in the “Research Portfolio” section of this report). This initiative supports projects that are designed to accelerate the pace with which research findings can be translated into improved quality of care and improvements in the health care system’s ability to deliver that care. In response to AHRQ’s call for research proposals, the agency funded 22 cooperative agreements that are primarily focused on improvements in the delivery and outcomes of health care, with a focus on priority health conditions, such as diabetes and heart disease, and priority health issues, such as long-term care, bioterrorism, and children’s mental health. First year funding for this initiative totals approximately $2.4 million, and funding in subsequent years could reach $19.5 million.

Following are some examples of the funded partnership projects:

- **Partnership to Improve Children’s Health Care Quality.** The partners for this project are the National Initiative for Children’s Healthcare Quality (NICHQ), the American Academy of Pediatrics (AAP), a certifying body (the American Board of Pediatrics, ABP), and Children and Adults with Attention Deficit Disorder (CHADD). The project will build on NICHQ’s success in improving care for children with ADHD by engaging five State AAP chapters in systems- and evidence-based collaborative learning sessions along with an interactive Web-based CME quality improvement tool (eQUIPP). ABP will collaborate by including eQUIPP as a vehicle for satisfaction of new certification requirements. Efforts in subsequent years will focus on supporting these local improvement networks, spreading these efforts to additional AAP chapters, and beginning work with pediatric residency training programs.

- **Partnership for Achieving Quality Home Care.** This project, awarded to the Visiting Nurse Service of New York, will launch a national partnership among home health care providers to improve care for a priority population, elderly home care recipients, by creating a model and establishing an infrastructure through which collaborating organizations can identify and prioritize goals for improvement and gain access to methods, tools, and materials that will enable them to reach beyond what they could do as individual organizations to conduct more sophisticated, evidence-based quality improvement activities. A learning collaborative model, adapted from the successful Breakthrough Series approach developed by the Institute for Healthcare Improvement (IHI), will be created to serve as a central mechanism of the partnership. Activities will include 14 home health agencies, up to two national home health industry associations, two accrediting bodies, and the National Academy of Home Care Physicians.
- **Measurement of Quality and Bioterrorism Preparedness: An Impact Study.** This project, which was awarded to the Joint Commission on Accreditation of Healthcare Organizations, consists of two distinct but complementary components. The first element relates to performance measurement using an indicator-based approach to measuring quality of care that will demonstrate the impact of evidence-based measurement on health care quality across U.S. hospitals. Areas of focus will be congestive heart failure, acute myocardial infarction, community-acquired pneumonia, and pregnancy. The second element will address an essential element of overall preparedness of health care organizations for a bioterrorism event. The goal is to assess improvements in linkages between health care organizations, the public health infrastructure, and emergency response in the wake of multiple influences such as implementation of the revised Joint Commission emergency management standards, occurrence of national events, and availability of Federal funding for bioterrorism preparedness.

Monitoring the Nation’s Health Care Safety Net

In FY 2000, the Institute of Medicine released a report describing the health care safety net in the United States as “intact but endangered.” In particular, the report emphasizes the precarious financial situation of many institutions that provide care to Medicaid, uninsured, and other vulnerable patients; the changing financial, economic, and social environment in which these institutions operate; and the highly localized, “patchwork” structure of the safety net. One of the five key recommendations in the report concerns the need to improve data systems used to monitor the capacity and stability of the Nation’s health care safety net to meet the health care needs of vulnerable populations.

In response to this recommendation, AHRQ and the Health Resources and Services Administration, in consultation with the Office of the Assistant Secretary for Planning and Evaluation and the National Center for Health Statistics, have begun a joint safety net monitoring initiative. An expert meeting on November 9, 2000 provided an overview of the issues involved in establishing a monitoring system. Those attending the meeting recommended a monitoring system that would have four main goals:

1. Provide baseline information and an assessment of policymakers' information needs for the safety net system and its environment.
2. Establish an early warning system to alert policymakers to changes in safety net capacity and stability.
3. Provide information to policymakers about the status of safety net providers and the populations they serve that can help in designing interventions and strategies to achieve policy objectives.
4. Develop and implement a research agenda on safety net and access-related issues for low-income populations.

To accomplish these goals, we need to develop more precise knowledge of what should be measured, identify data and measures that are currently available, identify opportunities and strategies to develop data capacity, and assess the feasibility of monitoring these areas. AHRQ and HRSA have agreed to a three-part strategy focusing on both safety net providers and the populations they serve.

- **Develop a databook to describe baseline information.** A project is now underway to describe the current status of the safety net in more than 90 metropolitan areas, as well as in more than 1,800 counties across 30 States. Core information for the databook is being drawn from a wide variety of existing data sources and covers demand for services, financial support, the structure of the safety net, and a wide variety of community contextual characteristics.
- **Identify a core set of key tools to enable State and local health officials to measure key indicators of safety net status for their service areas.** This book will include chapters on how to measure the size of the safety net population in a local area, guidance on data collection, a case study of building a State data system, information on how to assess the financial status of hospitals and community health centers, suggestions for monitoring the status of rural safety nets, and the use of emergency departments as a window on access to care.
- **Make longer term recommendations on the data elements needed.** The book will include recommendations on the data elements needed in the future to effectively monitor the capacity and performance of safety nets at the Federal, State, and local levels.

Strategic Goals and Performance Planning at AHRQ

The Agency for Healthcare Research and Quality's strategic plan guides the overall management of the Agency, and it serves as a road map for AHRQ activities during the year. Each year, during planning and budget development activities, we assess the progress the Agency has made toward achieving each of the goals and plan for work in years to come. The program performance information that follows here is arrayed according to our strategic plan goals and is consistent with the requirements of the Government Performance and Results Act of 1993 (GPRA).

Goal 1: Support Improvements in Health Outcomes. This goal focuses on research to understand and improve decisionmaking at all levels of the health care system, the outcomes of health care, and in particular, what works, for whom, when, and at what cost.

Goal 2: Strengthen Quality Measurement and Improvement. This goal involves support for research to develop valid and reproducible measures of the processes and outcomes of care, studies to identify the causes of medical errors and ways to prevent them, research to develop strategies for incorporating quality improvement measures into programs, and studies on dissemination and implementation of validated quality improvement measures and tools.

Goal 3: Identify Strategies to Improve Access, Foster Appropriate Use, and Reduce Unnecessary Expenditures. In working toward this goal, we support research to identify ways to enhance access to care, particularly for vulnerable populations; determine what works and doesn't work in health care to ensure the appropriate use of services; and develop new ways to promote cost-effectiveness in the use of scarce health care resources.

Goal 1 – Outcomes Research

Measuring the Benefits, Risks, and Results of Research

Rapidly rising healthcare costs, questions about effective medical treatments, and the need for efficient delivery of health care services are the reasons why outcomes research has been one of AHRQ's core activities for over a decade. Patient outcomes research provides evidence about the benefits, risks, and results of treatments that take place in "real world" settings so clinicians and patients can make more informed health care choices.

Outcomes research answers a number of very fundamental questions about health care services: What works and doesn't work? Is it having the desired effect? Does it provide value for the resources used? The answers to these questions form a solid foundation for efforts to improve health care quality and patient safety, enhance access to care, and improve the cost-effectiveness of care.

Outcomes research also looks at differences in care from one part of the country to another and from one population group to another. Repeatedly, studies have documented that therapies as commonplace as hysterectomy and hernia repair are performed much more frequently in some regions than in others, even when there is no difference in the rates of disease.

The results of AHRQ-funded outcomes research—such as the effectiveness of given treatments or clinical intervention strategies—and patient health outcomes measures often serve as the foundation for the development of various quality indicators and other tools, which increasingly are being integrated into the "report cards" that purchasers and consumers can use to assess the quality of care provided in health plans. For public programs such as Medicaid and Medicare, outcomes research provides policymakers with the tools to evaluate, monitor, and improve the delivery of effective health care services in the most efficient manner. By linking the care people get to the outcomes they experience, outcomes research has become the key to developing cost-effective ways to improve the quality of care.

In 2002, AHRQ's outcomes research portfolio included more than 100 projects that addressed a wide range of topics; focused on disparities based on sex, ethnicity, age, socioeconomic status, and geographic location; and encompassed a number of AHRQ's flagship programs such as the Centers for Education and Research on Therapeutics (CERTs), Evidence-based Practice Centers (EPCs), and the U.S. Preventive Services Task Force.

Examples of findings from recent AHRQ supported outcomes studies and projects currently underway include:

- **Prescription drugs:** An AHRQ study published in the *New England Journal of Medicine* found that a carefully designed and implemented prescription drug reference-pricing policy reduced overall drug expenditures without any obvious adverse clinical outcomes for the beneficiaries. Reference drug pricing programs work on the principle that if several drugs work equally well for a certain condition, the program will fully fund the drug that costs the least. Patients may choose the more expensive drug, but the program will only reimburse them for the cost of the lowest cost reference drug(s). This study, which examined data 2 years before and 1 year after implementation of a reference-based pricing policy in the province of British Columbia, focused specifically on a large group of elderly Canadian Pharmacare beneficiaries who took drugs to treat hypertension.

- **Heart disease:** AHRQ-supported research found that patients who take beta-blockers (drugs to slow the heart rate and reduce contractions of the heart muscle) prior to bypass surgery appear to have improved survival and fewer complications during and after the procedure. Researchers indicate that up to 1,000 lives potentially could be saved each year by giving patients beta-blockers before bypass surgery.
- **Children's health:** An AHRQ study found that all of the cases of rickets among pediatric patients in North Carolina occurred in black children who were breast-fed and who had not had vitamin D supplementation. As a result, the State is now providing free vitamin D supplementation to breast-fed infants and children aged 6 weeks and older. Over a 16-month period, more than 1,500 children received this supplement at a cost of about $1.50 per child.
- **Women's health:** An AHRQ-sponsored study found that among women with mild to moderate pelvic inflammatory disease (PID), rates of pregnancy, recurrent PID, and chronic pelvic pain were no different for inpatient versus outpatient treatment of PID. Inpatient treatment is more than 10 times as expensive as outpatient treatment. The effectiveness of outpatient as compared with inpatient antibiotic treatment had not been demonstrated before this study.
- **Diabetes.** An AHRQ study found that patients with both adult-onset (type 2) diabetes and other chronic conditions can still achieve good blood sugar control if they receive intensive therapy at a specialty diabetes clinic. Therapy included adding or changing oral medications or adding insulin to the treatment regimen.
- **Hip fracture:** An AHRQ-supported study found that medical staff in hospitals, rehabilitation facilities, and nursing homes could improve patient outcomes for the approximately 350,000 hip fractures that occur annually in the United States by focusing on reducing the risk of complications that often leave patients unable to work or lead to death. Currently, four of every ten patients are unable to walk without total assistance by 6 months after the fracture, and one-fourth of patients die within a year of their injury. In addition to pain and suffering, hip fracture and its consequences have a large economic impact, with hospital charges alone totaling roughly $6 billion a year.
- **Lower respiratory infection.** Lower respiratory infection (LRI) is one of the most common causes of death and hospitalization among nursing home residents. Although hospitalization can be lifesaving for the sickest patients, for those who are less ill there is considerable risk of incurring avoidable harm and additional expense from needless hospitalization. AHRQ-sponsored research studied nursing home residents with LRI and developed a strategy to predict which patients were at highest risk of hospitalization and which could be more effectively treated in the nursing home. Their findings demonstrated that up to 52 percent of nursing home residents with LRI are at low risk of death and may not require hospital admission.

- **Stroke:** Based on AHRQ's research, Medicare's Peer Review Organizations have implemented 73 projects in 42 States to increase anti-clotting therapy for Medicare beneficiaries who have suffered a stroke. The percentage of Medicare patients discharged on this therapy has increased from 58.4 to 71.1 percent.
- **Heart attack:** The goal of this ongoing AHRQ study is to develop a tool to help emergency medical teams responding to a heart attack patient determine whether the time delay required to transport the patient to a high-volume cardiac hospital versus a community hospital is justified. Researchers will also evaluate the incorporation of this tool into electrocardiograph equipment that records how electrical impulses move through the heart muscle as it contracts and relaxes.
- **Organ donation:** Prior to the 1980s, kidney transplants from living donors offered the only hope of recovery for patients with end-stage renal disease. However, improved surgical techniques, organ matching, rejection treatment, and organ preservation made kidney transplants from cadaver donors possible beginning in the late 1970s. Although organ donation rates have increased over the last 10 years, the supply of cadaver donors remains far short of the demand, and transplant centers are returning to living donations. The goal of this AHRQ-sponsored study is to design a model living-donor transplant program based on an evaluation of transplant center and individual barriers as well as facilitators of living donations.
- **Domestic violence:** Although domestic violence affects about 25 percent of U.S. women and 8 percent of U.S. men during their lifetimes, there is little information about the long-term health care effects for the victims. An AHRQ-sponsored study is attempting to close this gap by evaluating the medical care use, patterns, and costs associated with domestic violence, as well as the impact over time on the victims and their children.
- **Working conditions:** Some anecdotal indications suggest that low nurse staffing, increased use of overtime, and other changes in hospital working conditions are putting patients at a greater risk for adverse outcomes. An AHRQ-supported study is examining the relationship between adverse outcomes and use of overtime among nurses and measuring other conditions in the nurses' work environment affecting staffing and workload such as nursing skill mix, job strain, and risk of injury.

Prevention Research: Keeping People Healthy

General acceptance of preventive screening as a part of routine medical care didn't occur until the 1960s. Despite this acceptance, there was little evidence that screening tests and other preventive interventions actually improved patient outcomes. To address these issues, the U.S. Preventive Services Task Force (USPSTF) was established.

The Task Force is a critical source of information on what does and does not work in the health care system specific to clinical prevention. The Agency for Healthcare Research and Quality oversees the Task Force. First convened in 1984, the Task Force is an independent panel of health care experts who evaluate scientific evidence for the effectiveness of a range of clinical preventive services—including common screening tests, counseling for health behavior change, and chemoprevention (the use of drugs to reduce the risk of a disease)—and produce age- and risk-factor-specific recommendations for these services. The Task Force published its first set of recommendations in the 1989 *Guide to Clinical Preventive Services*, which was revised in 1995.

The Task Force conducts impartial assessments of scientific evidence for a broad range of clinical conditions to produce recommendations for the regular provision of clinical preventive services. The Task Force grades the strength of evidence as follows: A (strongly recommends), B (recommends), C (makes no recommendation for or against), D (recommends against), and I (insufficient evidence to recommend for or against). The Task Force is updating the 70 chapters in its 1996 report, and AHRQ is releasing the revised recommendations incrementally, as they are completed, on the agency's Web site, through the National Clearinghouse, and in medical journals.

The third Task Force, convened in 1999, began work on 12 initial topics selected by Task Force members based on preliminary work by two of the AHRQ's Evidence-based Practice Centers: the Research Triangle Institute/University of North Carolina at Chapel Hill and the Oregon Health & Science University. The selection process included a preliminary literature search of new information on prevention and screening published since 1995; consultation with professional societies, health care organizations, and outside prevention experts; a review of current levels of controversy and variations in practice; and consideration of the potential for a change from the 1995 Task Force recommendations.

In 2002, AHRQ solicited nominations of qualified individuals to serve as Task Force members. Members are eligible to serve for 3-year terms with an option for reappointment. A list of the topics selected by the third Task Force follows.

- Chemoprevention (heart disease and cancer).
- 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).

Also in 2002, the third Task Force issued the following recommendations covering colorectal cancer, osteoporosis, hormone replacement therapy, depression, chemoprevention, and breast cancer.

- **Colorectal cancer:** The Task Force in its strongest ever recommendation for colorectal cancer screening urges that all adults age 50 and over get screened for the disease, the Nation's second leading cause of cancer deaths. Various screening tests are available, making it possible for patients and their doctors to decide which test is most appropriate for each individual. Although each of these tests is effective in diagnosing colorectal cancer at an early stage when it is treatable, the Task Force noted that there is no single best test for all patients. Options include at-home fecal occult blood test (FOBT); flexible sigmoidoscopy; a combination of home FOBT and flexible sigmoidoscopy; colonoscopy; and double-contrast barium enema. Screening also can lead to early detection of adenomatous polyps—precancerous growths that can be removed to prevent them from progressing to cancer.
- **Osteoporosis:** The Task Force recommends that women aged 65 and older be screened routinely for osteoporosis, and that women at high risk for fractures begin screening at age 60. Women are at greater risk than men for osteoporosis because their bones are less dense. The Task Force found good evidence that the risk for osteoporosis and fracture increases with age and other factors, bone density measurements accurately predict the risk for fractures in the short-term, and treating women with no symptoms of osteoporosis reduces their risk for fracture. Other osteoporosis risk factors cited include lower body weight and no current use of estrogen. The Task Force concludes that the benefits of screening and treatment are of at least moderate magnitude for women at increased risk by virtue of age or presence of other risk factors.
- **Hormone replacement therapy:** The Task Force recommends against the use of combined estrogen and progestin therapy for preventing cardiovascular disease and other chronic conditions in postmenopausal women; they also recommend that women who are considering whether to start or continue hormone therapy to relieve menopausal symptoms discuss their individual risks for specific chronic conditions and personal preferences with their clinician. Although the Task Force found evidence for both benefits and harms of combined estrogen and progestin therapy—one of the most commonly prescribed hormone regimens—they conclude that harmful effects of

the combined therapy are likely to exceed the chronic disease prevention benefits for most women. The Task Force concludes that combined hormone therapy could increase bone mineral density and reduce the risk of fractures, and that it may reduce the risk of colorectal cancer. They also found equally strong evidence, however, that this therapy increases the risk for breast cancer, blood clots, stroke, and gallbladder disease, and that this therapy does not reduce the risk of heart disease but actually increases the risk of heart attacks. An estimated 14 million American women take hormone therapy.

- **Depression:** The Task Force indicates that clinicians can identify up to 90 percent of patients who suffer from major depression by asking all patients they see two simple questions. The questions are: “Over the past 2 weeks, have you felt down, depressed, or hopeless?” and “Over the past 2 weeks, have you felt little interest or pleasure in doing things?” This recommendation is the latest sign of the growing recognition that depression is one of the most common—and most commonly undiagnosed and untreated—chronic illnesses. About 19 million American adults suffer from depression, and estimates suggest that as many as two-thirds do not get treatment. This recommendation could bring many of these people into treatment and add millions to the numbers who are taking antidepressants such as Prozac. The Task Force adds that screening is only the first step—patients must have access to the right therapy and medicines, and health care systems must encourage patient followup care by clinicians.
- **Chemoprevention of heart disease:** The Task Force strongly recommends that clinicians discuss aspirin chemoprevention with adults who are at increased risk for coronary heart disease. Discussion with patients should address both the potential benefits and harms of aspirin therapy.
- **Chemoprevention of breast cancer:** The Task Force recommends that clinicians discuss the potential benefits and risks of taking prescription medicines such as tamoxifen to reduce the risk of breast cancer with their female patients who are at high risk for the disease. Women are considered at high risk if they are over 40 and have a family history of breast cancer in a mother, sister, or daughter or have a history of abnormal cells on a breast biopsy. The Task Force also recommends against the use of these drugs by women at low or average risk for breast cancer because the harmful side effects may outweigh the potential benefits. Those side effects can include hot flashes, increased risk for blood clots in the legs or lungs, and increased risk for endometrial cancer.
- **Breast cancer:** The Task Force recommends that women aged 40 and older have a mammogram with or without clinical beast examination every 1-2 years. They found fair evidence that mammography screening every 1-2 years could reduce breast cancer mortality by approximately 20 to 25 percent over 10 years. The evidence is strongest for women between the ages of 50 and 69, but the Task Force concludes benefits were

likely to extend to women 40-49 as well. The Task Force published two earlier breast cancer screening recommendations, in 1989 and 1996, both of which endorsed mammography for women over age 50. The Task Force is now extending that recommendation to all women over age 40, even though the strongest evidence of benefit and reduced mortality from breast cancer applies to women aged 50-69. This recommendation acknowledges that there are some risks associated with mammography (e.g., false-positive results that lead to unnecessary biopsies or surgery), but that these risks lessen as women get older.

Two of the Task Force's 2002 assessments yielded insufficient evidence to make a recommendation: does counseling in primary care settings to promote physical activity lead to sustained increases in physical activity among adult patients, and does routine screening of newborns for hearing loss and earlier treatment resulting from screening lead to long-term improvements in language skills.

Putting Prevention Into Practice

AHRQ's Put Prevention Into Practice (PPIP) program helps keep people healthy by translating the recommendations of the U.S. Preventive Services Task Force into practice. PPIP provides clinicians, office staff, and patients with various tools and resources to increase the delivery and use of recommended clinical preventive services. PPIP facilitates the delivery of services that can prevent some of the leading causes of death and disability, and it helps to combat barriers to the effective delivery of preventive care such as time constraints, lack of training, and patient anxiety about procedures and results.

Using PPIP Tools

PPIP tools are part of the STEP-UP (Study to Enhance Prevention by Understanding Practice) clinical trial. STEP-UP involves 80 family practices and clinics across Northeast Ohio in urban, rural, and suburban areas, including large Amish populations. The STEP-UP study evaluates a preventive related delivery intervention that is tailored to the unique characteristics of each practice. A nurse facilitator is assigned to each practice to identify special prevention-related needs of the practice population, such as immunizations, screenings, and counseling.

The STEP-UP manual provides tools that clinicians can use as-is or modify. PPIP materials included in this manual are adult and child preventive care flow sheets, child immunization flow sheets, posters, and patient reminder postcards. The STEP-UP trial plans to continue using PPIP tools because they can be easily adapted to clinicians' needs as they work to enhance the delivery of preventive services to local patient populations.

The PPIP program emphasizes that clinical prevention works and is important, that different people need different services, and that an extensive system-wide team approach is necessary to ensure that prevention is a routine part of every patient experience. AHRQ works closely with public and private partners to disseminate PPIP tools and resources, which include information on preventive services recommendations, an implementation guide for clinicians and health care systems, and personal health guides for children, adults, and people over 50.

In December 2001, AHRQ released *A Step-by-Step Guide to Delivering Clinical Preventive Services: A System Approach* designed for use by physicians, nurses, health educators, and office staff. The guide, which has been found to be effective in many clinical settings, explains how to deliver routine preventive care to every patient, tells what services to provide, describes how to involve all staff, and explains how to evaluate and refine systems. The guide breaks the process into small, manageable tasks, and it provides tools for tracking the delivery of preventive care, such as flow sheets (a simple form that gathers all the important data regarding a patient's condition) and health risk profiles. Other materials provided include questionnaires, presentation materials for use in introducing the system to administrators and office staff, and worksheets to identify staff interests and concerns.

Promoting Safe and Effective Use of Pharmaceuticals

Prescription and over-the-counter drugs are central to many of the most challenging issues faced in health services delivery and financing today. Expenditures for medications represemt a major portion of the health care dollars spent in the United States. Health plans, hospitals, and Federal, State, and local officials are wrestling with questions about which drugs are most effective and how to balance costs with providing the life-saving benefits that medicines offer. For over a decade, AHRQ has funded studies that focus on patient outcomes related to pharmaceutical therapy. Findings from these research projects, such as those shown below, have yielded important insights for the health care system and revealed key issues.

AHRQ research has shown that one of every five elderly Americans living in the community (not in a nursing home) is taking at least one inappropriate medication. AHRQ's research is focusing on ways to reduce such inappropriate prescribing of medicines. One promising approach now being studied involves the use of information technology such as hand-held computers to limit prescribing errors. Other efforts include looking at ways to help clinicians become more aware of the benefits and risks of certain drugs and possible complications from drug interactions.

An AHRQ-funded study published recently in the *Journal of the American Medical Association* indicates that about one-fifth of the approximately 32 million elderly Americans not living in nursing homes in 1996 used at least one or more of 33 prescription medicines considered potentially inappropriate. Nearly 1 million elderly men and women used at least 1 of 11 medications that a panel of geriatric medicine and pharmacy experts advising the researchers agreed should always be avoided in the elderly. The study highlighted the problem of inappropriate prescribing in the United States and underscored the importance of safe use of prescription medications as a critical component of quality of care.

Publication of these findings led to:

- Creation of the Department of Health and Human Services Working Group for the Secretary's Initiative on Assuring the Appropriate Use of Therapeutic Agents in the Elderly.
- Development of a monitoring system to effectively identify inappropriate medication use. The project is being conducted by the Mississippi quality improvement organization for the Center for Medicare & Medicaid Services' "Medicare Prescription Continuity of Care Project," which is focused on quality of care issues related to prescription drug use in elderly beneficiaries. They are using the "always avoid" medicines identified in the *JAMA* article as an indicator.
- Approval of the proposal, "Inappropriate Prescribing of Medication for Older Veterans," for funding by the Department of Veterans Affairs. This project will assess patterns and correlates of inappropriate medication use in the VA. By linking VA pharmacy and electronic medical record data, they are developing an algorithm to determine an adjusted rate of inappropriate prescribing that accounts for some of the rare indications for use.
- Development of a medication management indicator for Medicare HEDIS that focuses on quality of prescribing for the elderly. The indicator was developed by the National Committee for Quality Assurance.

Patients and caregivers shouldn't 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, which conducts research and provides education to advance the optimal use of drugs, medical devices, and biological products such as vaccines. 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.

Focus of the Centers for Education and Research on Therapeutics (CERTs)

Duke University:	Approved drugs and therapeutic devices in cardiovascular medicine.
University of Arizona:	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

Although 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. The facts are:

- **Underuse.** 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.
- **Drug/treatment interactions.** Studies conducted prior to FDA approval may not test medical products in combination with other therapies often used by the same patients.
- **Off-label use.** 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.
- **Unexpected side-effects.** Some side effects of medical products emerge only after they have been approved for release, 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 implementing effective educational interventions for caregivers. The program is also a critical complement to the Food and Drug Administration's (FDA's) postmarketing studies. Participants in the CERTs program—Federal government agencies, academic organizations, managed care organizations, drug and device companies, practitioners, commercial research groups, and consumer groups, among others—are committed to seeking answers together

Since the program's inception in September 1999, the CERTs have developed a portfolio of more than 120 completed and ongoing studies. Following are a few examples of how the CERTs serve as a trusted national resource for those seeking to improve health through the best use of medical therapies.

- Aspirin is inexpensive, available over-the-counter, and greatly reduces the risk of heart attack, stroke, and related death in people with coronary artery disease (CAD). Similarly, beta-blockers, have been shown to help people with congestive heart failure (CHF). There have been some successes in translating research and research recommendations into practice. For example, a recent study done by the Duke University CERT showed that 87 percent of cardiac patients were using aspirin. This reflects, in part, the adoption of recommendations from the AHRQ-sponsored U.S. Preventive Services Task Force. However, data collected by the Duke University CERT also confirmed that 13 percent of high-risk patients with CAD were not receiving adequate therapy. The people with CAD who were not taking aspirin were almost twice as likely to die within 1 year as those who were taking aspirin. 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 life-saving medicine to people who need it. Programs to overcome barriers and save lives can be designed once more is understood about why people are not taking these medicines.
- The effectiveness of drugs for women and children with HIV depends on the way patients take the drugs and how their bodies handle the medicine. The University of North Carolina CERT developed a screening test for kids 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 the way the drug was taken or absorbed. Research on the screening test had an unexpected, important finding: giving anti-HIV drugs with water to babies can speed the passage of the drugs through babies' systems before they have a chance to work. Giving drugs in combination 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. 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 the problem was only uncovered by the screening test. 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.
- Collectively, the CERTs have access to more than 20 unique data sources representing over 50 million people, which they use to conduct population-based studies. Many of

these studies have been conducted within Medicaid populations, including drug effects and use, prior authorization for use of nonsteroidal antiinflammatory drugs (NSAIDs), prevention of falls, reimbursement for community providers of long-term care, and evaluation of a nursing-home dispensing change. In addition, studies are underway to gather information that Medicaid programs can use to make coverage and other policy decisions such as drug utilization review, economic effects of beta-blocker therapy in heart failure, efficacy and toxicity of drugs used in pediatric AIDS, prevalence of type-2 diabetes mellitus in children, drug interactions, fractures related to osteoporosis, and other topics. The Vanderbilt CERT, in particular, has a long history of providing technical assistance to the Tennessee Medicaid program under a contract that has been active since 1972.

- Many doctors prescribe antibiotics before dental treatment to 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 procedure, was 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 underway to have these findings incorporated into American Heart Association guidelines. These findings will affect an important source of unnecessary antibiotic use.

Promoting Evidence-Based Health Care

AHRQ’s 13 Evidence-based Practice Centers (EPCs) produce evidence reports and technology assessments on clinical and behavioral therapies and technologies that are common, expensive, and significant for Medicare and Medicaid populations. The EPCs systematically review and analyze scientific evidence to develop the reports. During their reviews, the EPCs flag areas where the evidence base is sparse and suggest future research directions.

In 2002, AHRQ awarded 13 new 5-year contracts to continue and expand the work performed by the first group of EPCs initiated in 1997. During the past year, AHRQ also formed a partnership with the Office of Medical Applications of Research (OMAR) at the National Institutes of Health to include EPC systematic reviews on each clinical condition presented at a Consensus Development Conference. OMAR works closely with the NIH Institutes, Centers, and Offices to assess, translate, and disseminate the results of biomedical research that can be used in the delivery of health services. The EPCs will present their topic-specific evidence-based reports to the NIH Consensus Development Conferences to ensure that they have the latest scientific evidence to support their deliberations. These conferences address complex issues of medical importance to health care providers, patients and the general public.

AHRQ funded 16 new evidence topics in 2002; nine of the topics were nominated by private-sector professional societies and providers, and seven of the EPC topics are being funded by other Federal agencies. In addition, AHRQ funded an EPC to continue to support the work of the U.S. Preventive Services Task Force, and several EPCs were funded to continue their work on technology assessments as requested by the Centers for Medicare and Medicaid Services (CMS).

FY 2002 EPC Reports and Technology Assessments

1. Islet Cell (cells in the pancreas that make insulin) Transplantation for Diabetes
2. Strategies to Improve Minority Health Care Quality
3. Treatment of Dementia
4. Pharmacological Management of Obesity
5. Community-Based Participatory Research
6. Health Literacy: Impact on Health Outcomes
7. Effective Payment Strategies to Support Quality-Based Purchasing
8. Biventricular Pacing (using a pacemaker to pace both pumping chambers of the heart) for Congestive Heart Failure
9. Economic Incentives: Impact on Use/Outcomes of Preventive Health Services
10. Cross-cutting Quality Measures for Cancer Care
11. Sexuality and Reproductive Health Following Spinal Cord Injury
12. Training for Rare Public Health Events: Bioterrorism (update of prior report plus development of tool to evaluate bioterrorism preparedness of U.S. hospitals)
13. Distance Learning Program – Web-based Curriculum for Dentists
14. Regional Models for Bioterrorism Preparedness
15. Total Knee Replacement (NIH Consensus Development Conference)
16. Efficacy of Behavioral Interventions to Modify Physical Activity

Since the start of the program in 1997, the EPCs have conducted more than 90 systematic reviews and analyses of the literature on a wide spectrum of topics and published the results and conclusions as evidence reports and technology assessments. Some of these reviews are ongoing, and others have been published. Users include doctors, medical and professional associations, health system managers, researchers, consumer organizations, and policymakers. 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. Examples include:

- Use of AHRQ evidence reports by the Social Security Administration to determine disability for various conditions, including: end-stage renal disease, infant and childhood impairments, repetitive motion disorders, speech/language disorders, chronic fatigue syndrome, treatment-resistant epilepsy, and multiple sclerosis.
- Use by the Veteran's Administration of the meta-analysis in *Testosterone Suppression: Treatment for Prostate Cancer* as part of its continuing medical education program.
- Development of a practice guideline by the American Academy of Pediatrics (AAP) based on the evidence report on *Diagnosis of Attention-Deficit/Hyperactivity Disorder.*

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. All EPCs collaborate with other medical and research organizations so that a broad range of experts are included in the development process. 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 AHRQ can take to encourage more health care organizations and other relevant groups to translate EPC reports into clinical practice guidelines and related products.

EPC Technology Assessment: Actinic Keratoses

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. The decision to cover the treatment of AK was based largely on the AHRQ Technology Assessment for Actinic Keratoses Treatment. This assessment suggests that the presence of AK is associated with the development of squamous cell carcinoma (SCC), the second most common skin cancer, 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.

Finding the Evidence for Quality Health Care

The National Guideline Clearinghouse™ (NGC), an Internet resource for evidence-based clinical practice guidelines located at www.guideline.gov, has been operational for 5 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, educators, and other health care professionals.

The NGC is designed to promote quality health care by making the latest evidence-based clinical practice guidelines available in one easy-to-access location. The NGC Web site is updated weekly with new and revised guidelines. In addition to its 24-hour access on the Internet, the clearinghouse has many useful features such as standardized abstracts containing information about each guideline and how it was developed, the ability to make guideline comparisons, access to the full text of guidelines or ordering information, and the capability to browse for guideline titles by organization, disease/condition, or treatment/intervention.

Undoubtedly, the NGC's capacity to make vast amounts of information quickly accessible to clinicians is its biggest asset. Before the development of the NGC, clinicians and others who wanted to study or compare guidelines for any medical condition had to contact individual guideline developers to obtain a copy. Users then had to perform their own side-by-side analysis to determine which, if any, of the guidelines they wanted to follow. The usefulness of the NGC the is evidenced by the large number of visits every week by physicians and other health professionals.

Management of chronic asthma. An estimated 14 to 15 million Americans have asthma. It is the most common chronic disease of childhood, affecting approximately 4.8 million children. More than 70,000 people are hospitalized each year for asthma-related conditions, and 5,000 people die annually of asthma.

In early FY 2002, AHRQ published an evidence report on management of chronic asthma. Subsequently, the National Heart, Lung, and Blood Institute's National Asthma Education and Prevention Program used the AHRQ evidence report in formulating and updating NAEPP guidelines for managing the care of adults and children who have this condition. The NAEPP Web site features a link to the AHRQ guideline and summary on management of chronic asthma.

Like all good tools, the NGC is designed to be used according to personal preference. For example, a cardiologist might check to see whether he or she should refer an arthritic patient to a rheumatologist by accessing the American College of Cardiology's guidelines to check compatibility with his or her own practice, or a nursing director of a large inner city clinic might check the childhood immunization guidelines so he or she can provide young mothers with more information about preventive care.

The NGC has more than 1,000 clinical practice guidelines submitted by over 180 health care organizations and other entities. New guidelines are added weekly. Over the past 5 years, NGC has had more than 6 million visitors, processed over 55 million requests, and received more than 120 million "hits" or visits. NGC receives over 60,000 visits each week.

AHRQ does not require NGC visitors to register in order to use the site; however, the third customer satisfaction survey of NGC indicates who uses the site. Physicians were the largest portion of survey respondents (40.6 percent), followed by nurses and/or nurse practitioners (20.5 percent). More than 93 percent of respondents rated their overall satisfaction with NGC as either "fairly satisfied" or "very satisfied" compared with 89 percent for the first annual survey. Respondents also provided many useful comments on how they were using the site 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 to find the best approach to treating their patients. The results from the third customer satisfaction survey reinforced the high level of satisfaction registered on earlier surveys.

Goal 2 — Quality

Making Quality Count

The United States has many of the world's finest health care professionals, academic health care centers, and other institutions. Every day, millions of Americans receive high-quality health care services that help to maintain or restore their health and ability to function. However, far too many do not. Some patients receive substandard care.

Quality problems may be reflected in a wide variation in the use of health care services, underuse of some services, overuse of other services, and even misuse of services, including an unacceptable level of errors. Sometimes patients receive more services than they need or they receive unnecessary services that undermine the quality of care and needlessly increase costs. At other times they do not receive needed services that have been proven to be effective.

The research that provided much of the basis for the 2001 report by the Institute of Medicine (IOM), *Crossing the Quality Chasm*, goes back several decades to early studies on quality of care, most of which were supported by AHRQ and its predecessor agencies. In its report, the IOM pointed out that quality problems occur across all types of cancer care and in all aspects of the process of care. For example, the IOM report described "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."

Poor quality care leads to patients who are sicker, have more disabilities, incur higher costs, and have lower confidence in the Nation's health care system. There is great potential to improve the quality of health care provided to Americans, and AHRQ is committed to this goal. We are working to maintain what is good about the existing health care system while focusing on the areas that need improvement.

Improving the quality of care and reducing medical errors are priority areas for the agency. AHRQ is working to develop and test measures of quality, identify the best ways to collect, compare, and communicate data on quality, and widely disseminate information about effective strategies to improve the quality of care.

Following are examples of AHRQ-supported research now in progress that focuses on improving health care quality:

- **Benefits of regionalizing surgery for Medicare patients.** In this ongoing study, researchers at Dartmouth Medical School are using Medicare data and data from AHRQ's Nationwide Inpatient Sample (NIS) to investigate the potential benefits of regionalizing patients who have certain high-risk procedures. In a recent journal article, they reported a 12 percentage point difference in survival for patients being treated for cancer of the pancreas at high- and low-volume hospitals. Only 4 percent of patients treated at the highest volume hospitals died, compared with 16 percent at the lowest volume hospitals. Indeed, they found that elderly patients undergoing treatment for any one of 14 high-risk cardiovascular or cancer operations were more likely to survive if they were treated in high-volume hospitals.
- **Improving obesity and diabetes education in vulnerable populations**. These researchers are examining the effectiveness of a multimedia, computer kiosk-based program to educate patients about prevention of obesity and diabetes and diabetes self-management. Programs have been designed to be culturally competent for Hispanic and black patients and are intended to improve their knowledge, self-care practices, and ultimately, glucose control for those with diabetes. The computer kiosks have been placed in clinics and churches in Chicago in order to reach patients both within and outside the health care system.
- **Bringing evidence-based medicine to the hospital bedside.** Researchers at the University of Iowa are carrying out a 3-year randomized study at 12 hospitals in Iowa, Missouri, and Illinois to evaluate the effectiveness and cost-effectiveness of implementing an evidence-based acute pain management guideline for hospitalized elderly hip fracture patients. The intervention targets both nurses and prescribing

Using Research Findings to Improve Quality of Care for Diabetes Patients

A survey of providers identified many barriers to achieving treatment goals for diabetes patients, including the frequently asymptomatic character of the disease, the involvement of many body systems, and difficulties in altering lifestyle (activity level, diet, and obesity).

AHRQ-funded studies have used broadly representative groups of patients with diabetes to examine outcomes and success in controlling blood sugar. These studies have shown that:

- After 12 months, 87 percent of patients in one study achieved good control of blood sugar by the use of complex treatment regimens and a team approach, with many patients receiving either two oral medications or one oral drug plus insulin injections.
- Another study showed that patients can achieve good control of diabetes if providers recommend intensive therapies, use a team approach, furnish appropriate preventive care, and use proven strategies to help patients better manage their care.
- Family members play an important role in helping older patients with diabetes manage their care. This study found that more than one-third of family members went to doctor visits with diabetes patients aged 70 and older. Many family members (22-50 percent) reported helping with diabetes care (medication, diet). Patients who received more help from family members were more likely to both take their medicines and follow their diets.

physicians and includes training, computerized learning modules, the use of opinion leaders, the use of feedback and reminder cards, and system interventions for modifying chart forms and institutional policy. The goals are to determine whether a multidimensional organizational intervention alters nurse and physician behaviors and whether institutional barriers to change are reduced.

Examples of recent findings from AHRQ-supported research on improving health care quality include:

- **Effects of nurse staffing levels on postoperative outcomes.** A study published in June 2002, shows a relationship between fewer registered nurses in hospitals and an unusually high number of cases of postoperative pneumonia. AHRQ researchers linked discharge data from hospitals in 13 States with American Hospital Association data on hospital characteristics and nurse staffing. They used the data to examine the impact of nurse staffing on four postsurgical complications: Venous thrombosis/pulmonary embolism, pulmonary compromise, urinary tract infection, and pneumonia among patients undergoing major surgery. After controlling for severity of illness and hospital characteristics, fewer RN hours per patient day were found to be significantly associated with more postsurgical pneumonia. This study used different data and different methods but reached the same conclusions as another recent AHRQ-funded study by researchers at the Harvard School of Public Health and Vanderbilt University, which was published in the May 30, 2002, issue of the *New England Journal of Medicine.*

- **Implementing evidence-based screening for chlamydia.** Chlamydia infection is the most common sexually transmitted disease in the United States. These infections cause severe reproductive problems and account for billions of dollars in costs to the U.S. health care system. Nevertheless, only about 20 percent of eligible women aged 15-25 are screened for chlamydia infection. Effective treatment of chlamydia will reduce future infertility. A team from the University of California, San Francisco, and Kaiser Permanente found that it was possible to dramatically increase chlamydia screening rates through a sustainable and reproducible intervention. By engaging leadership, identifying barriers and solutions, and monitoring progress, participating clinics were able to increase screening 13-fold and decrease the average infection rate compared with control sites.
- **Enhancing the quality of primary care for depression.** Most depressed patients who visit primary care doctors want to be treated for their depression, but many do not receive adequate treatment despite the availability of effective medications and psychotherapies. Two AHRQ-supported studies from Partners in Care—a dissemination trial of two quality improvement (QI) interventions for depression—found that QI programs that support treatment choices of depressed patients can improve the likelihood they will be treated and receive preferred treatments, and that the cost-effectiveness of these QI programs is comparable to that of accepted medical interventions. The studies were led by researchers at the University of California, Los Angeles, and involved 46 primary care clinics in 6 managed care organizations. Participants were randomized to a medication QI program, a psychotherapy QI program, or usual depression care.

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*, galvanized attention on the unacceptable number of medical errors occurring in the United States every day.

The report brought patient safety to the forefront of our attention and led to unprecedented efforts to find solutions. The report showed that a wide gap exists in the quality of care people receive and the quality of care that we as a Nation are capable of providing. According to the IOM, as many as 44,000 to 98,000 people die in hospitals each year as a result of medical errors. Even using the lower estimate, this would make medical errors the eighth leading cause of death in this country.

Five Steps to Safer Health Care

The following five steps can help you avoid medical errors and get the best quality of care possible.

1. **Speak up if you have questions or concerns.** Choose a doctor you can talk comfortably with, and take a relative or friend with you if this will help you.
2. **Keep a list of all the medicines you take.** Tell your doctor about the medicines that you take, including over-the-counter medicines and dietary supplements like vitamins and herbals. Tell them about any drug allergies you have. Ask about side effects. Be sure you receive the right medicine.
3. **Make sure you get the results of any test or procedure.** Ask your doctor or nurse when and how you will get the results of tests or procedures. If you do not get them when expected, call your doctor and ask for them.
4. **Talk with your doctor about your options if you need hospital care.** If you can choose from more than one hospital, ask your doctor which one has the best care and results for your condition. Find out about followup care before you leave the hospital.
5. **Make sure you understand what will happen if you need surgery.** Who will be in charge of your care in the hospital? What will be done? How long will it take? Tell the doctors and nurses if you have allergies or have ever had a bad reaction to anesthesia.

Medical errors cause more deaths annually than 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.

Research on medical errors and other patient safety issues is not new to AHRQ. We have 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 sponsored by AHRQ 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 tools for computer-assisted decisionmaking that can 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 is making a substantial investment in a multi-year effort to reduce medical errors, enhance patient safety, and improve quality in all areas of health care.

The results of this investment in patient safety research are now being incorporated into practice. The following are examples of how this research is being used:

- AHRQ's Center for Education and Research in Therapeutics (CERT) in the University of Arizona Health Sciences Center developed a unique educational and research tool at www.qtdrugs.org. This Web site contains a list of 72 drugs that can cause life-threatening heart arrhythmias (abnormal heartbeat). Caregivers around the world can use this online resource to research specific drugs that might pose a risk to their patients, and they can submit clinical cases of drug-induced arrhythmias to the registry. Researchers are using the information submitted to develop profiles of people most at risk for drug-induced arrhythmia and to develop a genetic test that can identify them in advance of treatment.
- Patients and their families can use a new consumer tip sheet, published by AHRQ in English and Spanish, to help them play a more active role in ensuring that they get the best health care possible. The tips also help consumers prevent medical errors.
- AHRQ research has evaluated information about 73 proven patient safety practices to assist health care administrators, medical directors, health professionals, and others who are responsible for patient safety programs. AHRQ research has also identified 11 other patient safety practices proven to work but not used routinely in the Nation's hospitals and nursing homes. Voluntary Hospitals of America and Premier, Inc., use the information to guide their member hospitals in selecting projects to improve safety. Many chief executive officers, medical directors, and hospital safety officers have reported that they use the information to help them initiate projects to improve patient safety.

- To help patients assess the safety of their care, AHRQ, the Centers for Medicare & Medicaid Services, and other organizations supported the National Quality Forum (NQF), a not-for-profit membership organization created to develop and implement a national strategy for health care quality measurement and reporting. The NQF developed a list of serious, avoidable, adverse events that are so significant and so preventable that their occurrence should trigger an investigation of the organization in which they occurred. An example of such an event would be surgery on the wrong site. This list is now available to the public. For information on how to obtain a copy of *Serious Reportable Events in Healthcare,* go to the NQF's Web site (www.qualityforum.org) and click on "Activities/Consensus Reports" to find a description of the report, an executive summary, and ordering information for the full report.
- AHRQ supported the NQF's effort to develop a list of safe practices proven to be effective in reducing harm to patients. The list, which soon will be available to the public, is a tool to identify and encourage practices to reduce errors and improve care. Hospitals will be encouraged to report their use of these practices so that patients can determine what hospitals have done to improve the safety of care.

Examples of patient safety projects funded in FY 2002 and now in progress include:

- **Shared online health records for patient safety and care.** This 3-year project underway at Boston's Brigham and Women's Hospital is assessing the impact on patient care and safety of tools for electronic patient-provider communication and shared online health records. The researchers are investigating four related questions: (1) Is medication safety improved with patient prompts and a shared patient/physician medication list? (2) Do patient prompts, reminders, and entries in an online system improve chronic disease outcomes and adherence to guidelines in health care maintenance and chronic disease? (3) Does a prompted patient family history assessment improve detection of familial risk factors? And, (4) How does electronic communication and shared use of the online system by patients and physicians impact on medical practice, and how might barriers be addressed?
- **Improving patient safety by examining pathology errors.** These researchers are focusing on anatomic pathology diagnostic errors and their effects on patient outcomes. Previous studies have been limited to single institutions and reported variable diagnostic error percentages from less than 1 percent to 43 percent of all patients who underwent a biopsy or excisional procedure, with no correlation between error and outcome. These researchers are establishing a Web-based, pathologist-driven, national, voluntary anatomic pathology error database. The data will be used for continuous quality improvement targeted at error reduction and clinical outcomes improvement. Reporting institutions will receive quarterly and annual quality performance reports relating to errors and outcomes at their facilities. Specific factors

associated with increased risk for diagnostic error will be identified. An analysis will be performed to determine the potential sources of errors, and error reduction programs will be implemented at each institution based on the results of the analysis. This project will provide valuable information regarding diagnostic pathology errors and will lay the groundwork for future studies on other types of diagnostic pathology error and the effects of error reduction programs in pathology practice.

- **Menopause interactive decision aid system.** To improve menopausal counseling and help menopausal women more actively participate in the decisionmaking process, these researchers developed a novel prototype Web-based decision aid. They are further refining this prototype technology into a comprehensive Menopause Interactive Decision Aid System (MIDAS) that will provide personalized feedback about menopausal symptoms, risks for common conditions, and the effects of different treatment options on the short- and long-term consequences of menopause. Their main study hypotheses are that MIDAS can: (1) lead to better decisions and improve the quality of menopausal counseling; (2) improve compliance with a chosen menopausal plan; and (3) reduce medical errors associated with the use of menopausal therapies. Results from the Women's Health Initiative, published in July 2002, reinforce the importance of tools that help women make the best decisions for their needs and risk profile.

Working Conditions and Quality of Care

Understanding 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.

Over the last 2 years, AHRQ has funded more than 30 projects to 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 now being addressed by these researchers include:

- Effects of extended work hours, sleep deprivation, 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.

Working conditions—This term refers to the characteristics of the health care workplace and workforce, including the physical environment, workflow design, staffing, and organizational culture.

Health care workers—Defined as physicians, nurses, pharmacists, physician assistants, nursing assistants, and emergency medical technicians who provide direct care to patients in health care settings such as hospitals, ambulatory care settings, and nursing homes.

Tools for Patients and Health Care Consumers

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 reliable, evidence-based information to help them choose among health care plans, practitioners, and facilities. They also need information to help them participate more actively and effectively in their personal health care decisions. AHRQ is committed to providing the information consumers want and need to help them get the best possible health care.

The Consumer Assessment of Health Plans Study (CAHPS®) is an easy-to-use kit of survey and reporting 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.

The CAHPS team and AHRQ work closely with the health care industry and consumers to ensure that the CAHPS tools are useful to both individual consumers and to employers and other institutional purchasers of health plans. Collaborations include the following:

- Beneficiaries enrolled in 280 Medicare managed care plans assessed their plans, and this information was published in a handbook sent to nearly 40 million Medicare beneficiaries. The information also was made available on the Medicare.gov Web site.
- AHRQ and the Centers for Medicare & Medicaid Services (CMS) collaborated with the CAHPS®) consortium to develop a Medicare CAHPS® Disenrollee Survey. This survey of beneficiaries who had recently left a Medicare managed care plan was fielded by CMS in FY 2000. Approximately 80 percent of this survey related to quality. Survey data allow users to distinguish between disenrollment decisions that are unrelated to quality (e.g., enrollee moving out of the area that the plan serves) and disenrollment that is related to quality (for example, limited access to specialists).
- A version of CAHPS to assess care at the group practice level was developed in collaboration with the California Health Care Foundation and the Pacific Business Group on Health. The survey was developed in response to strong consumer interest in the ability of physicians in group practices to provide high-quality care. In CAHPS II, the team will develop ways of reporting CAHPS data to consumers as well as to group practices. An additional goal is to develop strategies for working with physicians to improve areas that consumers identified as troublesome.
- The CAHPS consortium and the Foundation for Accountability, with support from the David and Lucile Packard Foundation, developed a CAHPS survey to identify children with special health care needs and collect information on how well health plans are meeting those needs. This tool is used by numerous State Medicaid and other agencies involved in managing children's health insurance programs to help them meet the requirements set forth in the 1997 Balanced Budget Act. The National Committee for Quality Assurance has included this survey as a requirement in the HEDIS reporting set.
- AHRQ and CMS are collaborating in the development

Blue Cross of California Uses CAHPS

Shifting the focus from cost savings to improving quality, Blue Cross of California changed the method it uses to reward HMO physicians. Beginning in January 2002, the health plan awards bonuses to its physicians and medical groups based on quality of care and patient satisfaction. Satisfaction is determined through the use of data from the Consumer Assessment of Satisfaction, which was derived from the CAHPS HMO survey.

of a CAHPS® survey to obtain consumers' assessments of health care and services received in nursing homes. Survey development and sampling and data collection procedures were completed in FY 2001. Additional testing was carried out in FY 2002. Data collected from nursing home residents and next of kin will be used to help people choose a nursing home.

In May 2002, AHRQ funded three applications submitted under the CAHPS II request for applications (RFA) at a total cost of $2.5 million. CAHPS II will focus on development and testing of new and more effective ways to report quality data to consumers, patients, caregivers, and purchasers. It also will permit translation of the questionnaires and reports into Spanish and other languages. This initiative includes the development of assessment instruments for people with mobility impairments and more refined questionnaire items for people who receive care through preferred provider organizations (PPOs). The team also will work with caregivers and plans to use CAHPS data in quality improvement efforts.

Making Quality Count for Patients and Consumers

One of AHRQ's most important priorities is translating research into practice. We are constantly working to make sure research findings are put to work to help patients and consumers get the best possible health care. The following examples illustrate research projects funded by AHRQ in FY 2002 that are focused on providing health care quality information that will be useful to patients and consumers. The newly funded projects are:

- **Improving communication in the medical interview.** There is growing evidence that physicians do not give patients enough time to express their concerns during a medical interview. Physicians often interrupt patients before they have completely explained why they are seeking help. Nearly three-quarters of patients believe that inadequate time spent by physicians with patients

CAHPS helps State employees choose a health plan. The State of Washington's Health Care Authority is using a decision support tool originally developed through an AHRQ Small Business Innovation Research (SBIR) grant that incorporates CAHPS to help State employees and retirees choose among health plans. The tool was developed as Health Plan Select but, as customized by the State, is called Compare-A-Plan.

The tool is designed to help consumers learn about their health plan choices and then compare and choose a plan. The Web-based tool integrates price, benefits, physician choice, and health plan performance measures such as CAHPS and HEDIS.

is a very important cause of medical errors. Longer patient visits, however, often are not possible because of constrained resources. In response to this need to improve communication during medical encounters, researchers are implementing and evaluating a piloted educational intervention, the Establishing Focus (EF) protocol, in a community-based primary care network to train providers in the skills needed to provide high quality care in a time-limited encounter. EF was designed to improve providers' skills related to relationship-building, agenda setting, shared decisionmaking, and time management. EF training has enormous potential for improving the quality of ambulatory care, including better health outcomes and patient and provider satisfaction, at a modest, non-recurring cost.

- **Physician skill at providing end-of-life care.** The long-term objective of this project is to improve the quality of end-of-life care provided by physicians. Specifically, the goals are to (1) establish the measurement characteristics of a questionnaire to assess physician performance at specific end-of-life care skills; (2) assess the quality of end-of-life care provided by physicians who commonly care for dying patients, including oncologists, pulmonologists, cardiologists, and nursing home physicians; and (3) explore ways to implement interventions for improving the way physicians care for dying patients. The study involves 120 physicians in the Northwest and Southeast United States. The results of the study will identify specific strengths and weakness in end-of-life care provided by individual physicians and by physicians within the specialties under study. It also will provide exploratory data on present and potential nursing roles in improving end-of-life care. The findings will lead to targeted educational and systemic interventions to improve the quality of care for patients at the end of life.

- **Institutional permeability in long-term care.** The public image of residential long-term care in the United States, particularly nursing facilities, is of places where older adults—separated from home, family, friends, and past lifestyles—become disengaged from society and await death. Pilot research in a rural nursing facility has questioned the inevitability of this image and suggested that, insofar as long-term care facilities are able to sustain a high level of institutional permeability (defined as the dynamic exchange of people, communication, and support between a long-term care facility and the community in which it is located), it is possible to enhance well-being and sustain a high quality of life by reinforcing continuity in resident's lives and maintaining links with the world beyond the doors of the facility. These researchers will investigate this hypothesis in an array of different nursing and assisted living facilities (urban-rural, ethnically diverse-ethnically homogeneous, small-large). Their findings may lead to a change in the way society views long-term care, as well as the development of new strategies for enhancing the quality of life for elders living in long-term care facilities.

National Healthcare Quality Report

AHRQ is developing the first-ever annual report on the quality of health care in the United States, as called for in the agency's reauthorization legislation, which became law in 1999. The goal of the report, now in development and due out in 2003, is to provide a clear, easily understood picture of the quality of health care in America. 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 and addressing the health care needs of priority populations. See "Research on the Health Care of Priority Populations" in this report to learn about AHRQ's program priorities and activities focused on women, children, and minorities.

The report project is being led by AHRQ with collaboration from the Centers for Disease Control and Prevention's (CDC's) National Center for Health Statistics. An interagency work group is guiding the development of this landmark first report. Other members of the work group include the Department's Office of the Assistant Secretary for Planning and Evaluation, the Centers for Medicare & Medicaid Services, the Food and Drug Administration, the Health Resources and Services Administration, the Indian Health Service, the National Institutes of Health, and the Substance Abuse and Mental Health Services Administration.

As of FY 2002, work on the National Healthcare Quality Report (NHQR) has proceeded in four areas:

- **Developing a conceptual framework for reporting.** AHRQ commissioned the Institute of Medicine to develop the conceptual framework for the NHQR. The IOM formed a 14-member committee of leading experts in quality. They recommended a conceptual framework that includes both dimensions of care (for example, safety, effectiveness, patient-centeredness, timeliness, equity) and patient needs (for example, staying healthy, getting better, living with illness or disability, coping with the end of life). The quality monitoring system developed for the NHQR will be organized around this framework.
- **Identifying potential measures to populate the framework.** AHRQ has formed an interagency work group to identify candidate measures for the report. The work group developed a call for measures that was sent to all relevant Federal agencies, and the IOM initiated a similar call to the private sector. The work group is evaluating candidate measures received from these sources with the goal of populating the reporting framework developed by the IOM.
- **Identifying data sources for potential measures.** Potential data sources for the NHQR include population-based data collection efforts, establishment/provider-based data collection efforts, vital statistics, regulatory data collection efforts, and

surveillance activities. We expect that the first NHQR will rely heavily on Federal databases. As time goes on, private data sources will likely take on added importance.

- **Initiating audience research on format and design options for the report.** AHRQ is conducting research to identify the needs of potential audiences for the report and to develop a report that meets those needs. AHRQ has reviewed existing reporting systems and conducted a comprehensive literature search for information on quality reporting programs, both here and abroad.

National Healthcare Disparities Report

AHRQ is also developing the first-ever report on prevailing disparities in health care delivery in the United States. A large and consistent body of research, much of it funded by AHRQ, has demonstrated persistent disparities in health care quality and access associated with race, ethnicity, socioeconomic position, sex, age, functional disability, and place of residence.

The agency's reauthorization legislation enacted in late 1999 directed AHRQ to develop a report, beginning with fiscal year 2003, on prevailing disparities in health care delivery as they relate to racial factors and socioeconomic factors in priority populations. The National Healthcare Disparities Report (NHDR) will serve as a companion document to the National Healthcare Quality Report, providing greater depth and insights into differences in health care quality for priority populations.

This report will be an unprecedented effort to present a comprehensive picture of prevailing disparities in health care in the United States, and it will identify opportunities for improving care for priority populations. The report also will provide a benchmark for evaluating the success of programs to reduce disparities in health care.

The project is being led by AHRQ and will involve collaboration with multiple components of the Department of Health and Human Services. The report is scheduled for publication in September 2003. As of FY 2002, work on the NHDR is proceeding as follows:

- **Conceptual framework.** The NHDR will build on the conceptual framework developed for the NHQR, its congressionally mandated sister report. This framework is a matrix of health care and consumer perspectives on health care needs. The framework includes dimensions of health care quality, along with access to care, use of services, and costs of services.
- **NHDR measures and data sources.** AHRQ has sought input from a wide range of stakeholders who helped to identify additional datasets and develop the final set of measures. The data group, which includes AHRQ staff with special expertise in data

analysis, has focused on defining racial and socioeconomic factors and priority populations, identifying data sources, and developing preliminary access, use, and cost measures relevant to studying disparities. A department-wide NHDR Interagency Work Group has provided valuable advice and comments on draft definitions and measures and identified new data sources for the report. AHRQ staff also have collaborated with external data experts from multiple organizations to obtain input on measures and data sources.

- **NHDR audience research.** AHRQ is currently conducting research to identify the needs of potential audiences for the report in an effort to develop a final product that is both useful and responsive to the needs of users.

National Quality Measures Clearinghouse

The National Quality Measures Clearinghouse™ (NQMC) is a Web-based repository of tools for measuring health care quality. The NQMC was established in FY 2002 by AHRQ for use by health care providers, managers, policymakers, and others who are interested in health care quality measurement. The NQMC is a significant enhancement of the Agency's CONQUEST (Computerized Needs-Oriented Quality Measurement Evaluation System) library of quality measures.

Criteria for inclusion of measures in the NQMC were developed based on input from national organizations, consensus-development workgroups, and researchers in the field. In order to be included in the NQMC, measures must be in use currently or in pilot testing and must satisfy the inclusion criteria. Measures nominated for inclusion in the NQMC are screened initially according to three broad categories:

- Importance of the measure.
- Scientific integrity.
- Feasibility.

The submission of measures to be considered for inclusion in the NQMC is an ongoing process. Measures are submitted to the NQMC by national, State, and local organizations involved in developing and/or using quality measurement tools. These include health care systems, accreditation organizations, professional associations, research institutions, licensing boards, and other relevant organizations.

The NQMC is under development and is scheduled to become operational at www.qualitymeasures.ahrq.gov early in calendar year 2003.

Goal 3 – Costs, Use, and Access to Health Care

Addressing Challenges to Care

The United States spends a larger share of its gross domestic product on health care than any other major industrialized country. Although the rate of growth in health care costs slowed somewhat in the mid-1990s, costs are once again on the rise at a rate that exceeds other sectors of the economy.

In 2000, for example, the average annual health insurance premium in the private sector increased to $2,655 for single coverage and $6,772 for family coverage, an increase of 33.3 percent and 36.7 percent, respectively, above the costs in 1996, according to data from AHRQ's Medical Expenditure Panel Survey (MEPS). Americans are concerned about increased out-of-pocket health care costs, higher health insurance premiums, and rising prescription drug prices. Thus, identifying ways to contain health care costs and obtain high value for our health care investments continues to be a priority for the Nation, particularly for policymakers and public and private payers.

In addition to concerns about costs, many Americans experience problems accessing care when they need it. This is particularly true for the poor, the uninsured, members of minority groups, rural residents, and other priority populations. At the same time, examples of inappropriate care, including overuse and misuse of services, continue to be documented.

All players in the health care system—employers, insurers, providers, and consumers, as well as Federal and State policymakers—need objective, science-based information they can rely on to help them make critical decisions about health care costs and financing and ways to enhance access to care. For more than 10 years, AHRQ has been working to meet this need. AHRQ addresses critical health policy issues through ongoing development of nationally representative and specialized databases, the production of public use data products, and research and analyses conducted by AHRQ staff and outside researchers.

Impact of Payment and Organization on Cost, Quality, and Equity

Health care in the United States is provided by large systems, with complex funding streams. Before we can improve the quality and efficiency of health care, providers, purchasers, and policymakers need more information about how these systems operate and how different financial and organizational arrangements affect health care. AHRQ's FY 2002 research grant portfolio addressed these issues by asking questions such as:

1. How do different payment mechanisms and financial incentives affect quality, access, and the cost of care?
2. How can payment arrangements be designed to provide appropriate incentives to both patients and providers and enhance patient knowledge of and compliance with treatment regimens?
3. How does consumer and patient decisionmaking influence payment policies?
4. How do different patterns and levels of market competition affect the quality and cost of care?
5. What is 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?
6. What organizational structures and processes are most likely to sustain high quality, efficient health care?

AHRQ Research Focus on Health Care Costs

Health care costs and the allocation of scarce health resources have been a focus of AHRQ research for more than 10 years. All players in the health care system—employers insurers, clinicians, and consumers, as well as Federal and State policymakers—need objective, science based information to help them make critical decisions that involve health care costs.

For example, AHRQ-supported research has:

- Demonstrated the cost-effectiveness of self-management programs for people with chronic diseases.
- Identified steps employers can take to lower their costs for health insurance.
- Examined the effects of competition among HMOS on health insurance premiums.
- Analyzed the cost consequences of a variety of policy choices, such as prescription formularies, prior authorizations programs, and physician and organizational incentives.

AHRQ developed a Program Announcement on the effects of payment and organizational structures and processes on the cost, quality, and equity of health care. Important areas 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 care and to 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.

Health Care Markets and Managed Care

From a growing body of social science evidence we are learning that market dynamics and delivery system organization are critical determinants of patients' access, quality of care, and outcomes, as well as costs. Over the last few years, AHRQ's research portfolio has emphasized two areas of inquiry, each focusing on particular patient populations:

1. Which features of managed care improve the quality of care provided to patients with chronic conditions?
2. What public insurance program policies and practices improve access to care and quality of care for low-income children?

These areas of inquiry were selected in direct response to the need for information about key market and delivery system determinants. Decisionmakers need to know how deliberate or unintended changes in system determinants affect care provided to low-income children and people with chronic illnesses. In addition to these two priority areas, AHRQ has supported a broader portfolio related to marketplace complexities and delivery system organization.

To gather evidence on how best to provide care to the millions of Americans 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. Findings from this initiative are now emerging, including:

- 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 50 group practices, IPA/HMO payment formulas that capitated ophthalmology group practices and provided bonuses to

Costs for Mental Health Services

A study led by an AHRQ researcher found that using a managed care "carve-out" arrangement to provide equal coverage for mental health services did not raise costs for one large employer. Carve-outs are services provided within a standard health benefit package but delivered and managed by a separate organization. The researchers compared plan costs, use patterns, and access in the year prior to the changes with the 3 years following the changes.

Although the number of people treated increased nearly 50 percent, the costs to the plan for mental health services declined by almost 40 percent over the 4-year study period. Most of this decline was due to reducing lengths of stay for inpatient mental health treatment. Managed care did not limit access to outpatient treatment.

individual physicians 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.

- IPA networks consistently had worse process and outcome quality indicators for patients with chronic heart and lung diseases than more tightly managed medical groups.

Research on Lowering Health Care Costs

AHRQ-funded research provides essential information to help reduce health care costs to consumers, to employers who sponsor insurance coverage, and especially to the Medicare and Medicaid programs. Examples of findings from recent AHRQ research on lowering health care costs include:

- **Employers may lower their costs for health insurance.** The amount of cost-sharing an employer requires, as well as the number of plans the employer offers to employees, can significantly affect the employer's health care costs. This study found that employers may be able to lower their health insurance costs by offering their employees three or more health plans and making fixed-dollar contributions to each, thus making employees more price sensitive.
- **Effects of competition among HMOs.** More competition among HMOs may mean lower prices for consumers, according to this study. Researchers compared data on HMO premiums in various markets and found that premiums were lower in more competitive markets, where a high percentage of the population was enrolled in HMOs and HMOs competed for their business.

Costs and Outcomes in Dialysis Patients. Increasing comorbidity among patients with end-stage renal disease (ESRD)—for example, diabetes or other serious illness—may profoundly impact illness severity, risk of death, resource use, and overall health care costs in the dialysis population. Researchers at the University of Utah are developing a comorbidity tool to help clinicians identify high-risk patients and select the optimal dialysis modality early in treatment.

This will be of particular interest to the Medicare ESRD program, since most dialysis patients are aged 60 or older and have one or more comorbid conditions. The primary outcomes of interest will be hospital days and Medicare hospital costs.

- **Self-management programs for people with chronic diseases.** About 70 percent of all health care expenditures are related to chronic disease. According to this study, patients with chronic diseases who participated in a brief self-management training program improved their health or had less deterioration and used fewer health care services over a 2-year period, compared with their status before the program. The program led to savings of $590 per participant over a 2-year period, due to fewer hospital days and outpatient visits.
- **Treating middle ear infection in children.** Middle ear infection is the most frequent reason for prescribing antibiotics. In Colorado, low-cost antibiotics accounted for 21 percent of antibiotic expenditures for the condition, while high-cost antibiotics accounted for 76 percent of expenditures. A recent AHRQ study demonstrated that less costly antibiotics are just as effective as high-cost antibiotics in treating middle ear infection in children and that use of the less expensive antibiotics could have saved nearly $400,000 in Medicaid expenditures for the State of Colorado.

Current Research on Health Care Costs

AHRQ has many ongoing projects focused on health care costs, cost-effectiveness, and financing, including private insurance, Medicare, Medicaid, and lack of insurance. Examples of projects currently underway include:

- **Safety and financial implications of ED copayments.** Copayments are a commonly used patient-level incentive for modulating the demand for services and the use of unnecessary care. Although we know that copayments and other forms of cost-sharing can lead to reduced use of services, we do not know what effects these incentives have on patient outcomes. These investigators are evaluating the effects of different copayment levels on emergency department use, treatment costs, and patient outcomes within the Kaiser Permanente-Northern California health system. The main outcomes of interest are hospital admissions, ICU admissions, mortality, and treatment costs.
- **Impact of payment policies on the cost, content, and quality of care.** These researchers are combining data from health plans to examine how economic incentives inherent in the relationship between health plans and providers (physicians and hospitals) influence cost, quality, and type of services received by patients.
- **Reduced use of prescribed medicines among Medicare beneficiaries.** This study is assessing the impact of out-of-pocket costs incurred by Medicare+Choice beneficiaries on their use of prescription medicines.
- **Impact of patient-centered care on health care costs.** These researchers are examining the relationship between the provision of patient-centered care and health care costs, health status, and satisfaction. Patient-centered care is characterized by

incorporating the patient's experience of illness and psychosocial context into shared physician-patient decisionmaking. Other goals include characterizing the features of patient-physician communication that contribute to lower health care costs and identifying modifiable factors in physician interaction styles that can lead to decreased use of services, lower costs, and recognition of patient emotional stress.

Enhancing Access to Care

Adequate access to health care services continues to be a problem for many Americans, particularly poor people, those who are uninsured, minorities, residents of rural areas, and other vulnerable groups. Also, continuing changes in the organization and financing of care have raised new questions about access to a range of health services, including emergency and specialty care.

Enhancing access to health care services is a priority for AHRQ researchers. Examples of current research on health care access include:

- **Access to HIV Care in the United States.** These researchers are examining the factors that contribute to disparities in access to care for HIV across demographic subgroups and how access to new, more effective HIV therapies has changed over time. They also are examining outcomes of HIV therapy and whether access affects health-related quality of life, symptoms, disease progression, and 3-year mortality.
- **Clinical Outcomes of Asthma for Children**. Improving care for children with asthma is a national priority, and certain children—minorities, those who live in urban settings, and those who are poor—are at increased risk of adverse outcomes. These researchers are assessing the effects of lack of access to health care on improvements in clinical outcomes for children enrolled in Tennessee's Medicaid program. Outcome measures are ER visits and hospitalization for asthma. Their evaluation will increase understanding of how threats to health care access (e.g., gaps in Medicaid enrollment) potentially influence clinical outcomes in high-risk groups of children.
- **Urban/Rural Differences in Use of Long-Term Care.** These researchers are examining how community resources influence access to long-term care, including institutional care and community and home-based care. Elders with disabilities overwhelmingly prefer their own home to an institutional site of care, and home and community-based services have expanded in recent years to meet their needs. However, some elderly people are less likely to have access to home and community-based care, particularly elders living in rural areas. The researchers are using 1999-2001 data from Michigan nursing homes and home-based care programs to describe urban/rural differences in demographic and need characteristics of long-term care users.

- **Retention of Physicians in Rural Areas.** These researchers are examining data from a longitudinal survey of rural primary care physicians to describe the length of time the physicians spend in practice in areas identified as Health Profession Shortage Areas (HPSAs). They are identifying personal, practice, and community factors associated with longer retention. In addition, they will test their hypothesis that community assimilation is predictive of retention.

Recent findings from AHRQ-sponsored research on health care access include:

- **Effects of Lack of English Ability on Hispanic Children's Access to Care.** The disadvantage that some Hispanic children experience in their access to health care may be related to their parents' inability to speak English well enough to interact fully with the health care system, according to a recent study conducted by AHRQ researchers. They found that black and Hispanic children are at a substantial disadvantage compared with white children, even after accounting for health insurance and socioeconomic status. However, when their parents' ability to speak English is comparable, the differences between Hispanic and white children nearly disappear. These findings suggest that problems in accessing care for Hispanic children may be related to language ability and having parents whose English skills and understanding of the health care system are limited.
- **Access to Care for Asians/Pacific Islanders.** A recent AHRQ study found that Asians and Pacific Islanders who live on the West Coast have worse access to care than whites or any other ethnic group. This finding is surprising, since Asians had a higher proportion of high-income and well-educated individuals than other groups in the study. These access problems may be due to cultural differences and communication problems, according to the UCLA researchers who conducted the study. They surveyed demographics and access to care for patients receiving managed health care from 48 physician groups in California and five other States (Washington, Oregon, Texas, Arizona, and New Jersey).
- **Effects of SCHIP Reenrollment Policies on Children's Access to Care.** AHRQ's research indicates that as many as 11 million U.S. children ages birth to 18 are uninsured. Obtaining adequate access to care and maintaining a usual source of care are challenging for these children and their families. SCHIP (State Children's Health Insurance Program) ensures that uninsured children have access to care. Parents must periodically reenroll their children in SCHIP. Kansas, New York, and Oregon have active SCHIP reenrollment policies requiring parents to verify their children's eligibility. Florida, on the other hand, has a passive policy that requires parental notification only if changes occur that affect a child's eligibility for coverage. According to this study, at reenrollment only 5 percent of children in Florida's SCHIP were disenrolled compared with one-third to one-half of children enrolled in SCHIP in other States.

Medical Expenditure Panel Survey

AHRQ's Medical Expenditure Panel Survey (MEPS) provides a wealth of information on how Americans use and pay for health care. In addition to the core survey of households, MEPS also includes surveys of medical providers and establishments to supplement the data provided by household respondents on medical expenditures and health insurance coverage.

MEPS collects detailed information on health care use, expenditures, sources of payment, and insurance coverage for a representative sample of the U.S. civilian noninstitutionalized population. 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: 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.

A new questionnaire was incorporated into MEPS beginning in 2000. Questions were taken from AHRQ's CAHPS®, a research-based, validated survey tool that assesses people's experiences with their own health plans. Respondents were asked about the timeliness with which they received urgent and routine medical care, as well as their experiences during care. For example, responses indicate that among those aged 18 to 64, people without insurance were more likely than those with coverage to report sometimes or never receiving urgent care as soon as they wanted. These new measures will be included in the National Healthcare Quality Report, first due out in 2003, which will provide information to policymakers, providers, and consumers to monitor the Nation's progress toward improved health care quality.

MEPS Data Are Comprehensive and Widely Used and Quoted

Recently, the National Academy of Science's prestigious Institute of Medicine drew heavily on MEPS data in formulating its new report on health insurance and families. A senior researcher from AHRQ's Center for Cost and Financing Studies served as a formal reviewer for the report.

According to the IOM, MEPS provides the most comprehensive data on who uses what health care service and how much is paid for that service.

Collecting MEPS Data

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 2-1/2 year period. These data are linked with additional information collected from the respondents' medical providers and employers. 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 use. The level of detail these surveys provide permits the development of public and private-sector economic models to project national and regional estimates of the impact of changes in financing, coverage, and reimbursement, as well as estimates of who benefits and who bears the cost of a change in policy. No other surveys provide the foundation necessary 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.

MEPS establishment surveys have been coordinated with the National Compensation Survey conducted by the Bureau of Labor Statistics through AHRQ's 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 the National Center for Health Statistics' National Health Interview Survey, achieving savings in sample frame development and enhancements in analytic capacity.

AHRQ has moved from conducting a medical expenditure survey every 10 years to following a cohort of families on an ongoing basis. Doing so has four primary benefits: (1) it decreases the cost per year of data collected, (2) it provides more timely data on a

How MEPS data are used:

In the public sector: Entities such as the Office of Management and Budget, the Congressional Budget Office, the Medicare Payment Advisory Commission, and the Treasury Department rely on MEPS 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: MEPS data are used by many private businesses, foundations, and academic institutions—such as RAND, the Heritage Foundation, Lewin-VHI, and the Urban Institute—to develop economic projections.

By researchers: MEPS data are a major resource for the health services research community at large. Since 2000, 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.

Key Findings from the MEPS Household Component:

- In the first half of 2001, 16.7 percent of Americans were uninsured, slightly up from 16.1 percent in 2000 and 15.8 percent in 1999.
- Among those under age 65, more than a third of Hispanics (37.7 percent) and 20.2 percent of black non-Hispanics were uninsured during the first half of 2001, compared with 14.9 percent of white non-Hispanics.
- Among people under 65, Hispanics accounted for one-fourth (26.3 percent) of the uninsured population even though they represented only 13.1 percent of the overall population this age.
- Young adults ages 19-24 were the age group at the greatest risk of being uninsured in 2001, with one-third (33.9 percent) of this group lacking health insurance.
- In 1999, about 84 percent of Americans had medical expenses, and the mean expense per person with expenses was just below $2,600.
- In 1998, among those under 65, 82.1 percent had public or private insurance coverage.
- Over half of elderly Americans were covered by private insurance in 1998; but more than 4 in 10 held only public coverage. This represents a decline in private coverage and an increase in public coverage from 1997.
- Less than half of all Hispanic Americans and about half of black Americans were covered by private health insurance in 1998, compared with three-quarters of whites.
- During the first half of 1997, nearly 30 percent 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.
- In 1997, 78.7 percent of workers were covered by private health insurance, compared with half of individuals who were not employed.
- Among all racial/ethnic groups, Hispanic males were the most likely to be uninsured in 1997; 36.9 percent lacked coverage.

*Unless otherwise noted, all findings pertain to the U.S. civilian noninstitutionalized (community) population.

continuous basis, (3) it creates for the first time the ability to assess changes over time, and (4) it permits the correlation of these data with the National Health Accounts.

Databases and Other MEPS Products

AHRQ ensures that MEPS data are readily available—consistent with privacy policies—for use in research and policymaking. MEPS data are released in a variety of ways. For example:

- **Databases.** MEPS produces a number of analytical databases and releases a number of databases to the public, including demographic, health care use, access, expense, and insurance coverage information for all survey participants.
- **Printed data.** AHRQ publishes MEPS data in tabular form on a range of topics. Printed publications include methods reports, findings, and chartbooks.
- **Web site.** AHRQ maintains a Web site specific to the MEPS. Databases and other MEPS products are made available to the research community and other interested audiences, and AHRQ responds promptly to inquires from MEPS users. AHRQ responds to more than 100 inquires made through the MEPS Web site each month.
- **MEPSnet.** AHRQ has developed a set of statistical tools to allow immediate access to MEPS micro data in a nonprogramming environment. From the MEPSnet section of the MEPS Web site, through a series of interactive queries, the most inexperienced user has the ability to generate national estimates in a few seconds. Go to www.meps.ahrq.gov/MEPSNet/ to access this resource.
- **LISTSERV®.** The purpose of the MEPS LISTSERV® is to allow the free exchange of questions and answers about the use of the MEPS database. Currently, there are more than 500 subscribers to the MEPS LISTSERV.®
- **Training.** AHRQ conducts a series workshops—ranging in length from a few hours to several days—to educate policymakers, researchers, and other users about the range of questions that MEPS can answer and how the data can be properly used.
- **Data center.** AHRQ's Center for Cost and Financing Studies operates a data center to facilitate access to and use of MEPS data and answer questions from users.

Findings from the MEPS Insurance Component

Key Findings: 2000 Private-Sector

- Average health insurance premiums in 2000 were $2,655 (single coverage) and $6,772 (family coverage), an increase of 14.2 percent and 11.8 percent respectively over 1999.
- Average employee contributions to health insurance premiums in 2000 were $450 (single coverage) and $1,614 (family coverage), an increase of 7.1 percent and 12.2 percent respectively over 1999. This continues a trend from previous years.
- While premiums increased for all types of health insurance plans, those plans that allow enrollees to go to any provider continue to have the highest premiums and the largest percentage increase over the previous year. Exclusive-provider plans continue to have the lowest premiums and smallest percentage increases over the previous year.
- The percent of establishments offering health insurance in 2000 was 59.3 percent, up from 52.9 percent in 1996.
- Employers continue to drop offerings of health insurance to their retirees (regardless of age) since we began measuring this in 1977. Offerings to retirees under age 65 dropped from 21.6 percent of establishments in 1997 to only 12.0 percent in 2000. Offerings to retirees 65 and older dropped from 19.5 percent to 10.7 percent over the same period.
- Family premiums were significantly higher than the national average in New Jersey ($7,592), New Hampshire ($7,525), Massachusetts ($7,341), Connecticut ($7,292), Maryland ($7,287) and Illinois ($7,220). They were significantly below the national average in Mississippi ($5,983), North Dakota ($6,124), New Mexico ($6,222), and California ($6,227).

Key findings: 2000 State and Local Governments

- Average health insurance premiums for State and local government employees were $2,855 (single coverage) and $6,657 (family coverage). Premiums increased 10.4 percent and 10.0 percent respectively over 1999, continuing a trend begun in 1996.
- Average contributions made by State and local government employees to health insurance premiums were $251 (single coverage) and $1,267 (family coverage). Employee contributions increased 19.0 percent and 11.6 percent respectively over 1999.

- The percent of governments offering a choice of plans dropped from 34.7 percent in 1999 to 27.3 percent in 2000.
- Led primarily by smaller State and local governments, the percentage offering health insurance to retirees continue to drop: 39.l percent in 1999 to 19.9 in 2000 for retirees under age 65; 31.6 percent in 1999 to 21.6 percent in 2000 for retirees age 65 or older.

Healthcare Cost and Utilization Project

The Healthcare Cost and Utilization Project (HCUP) is a Federal-State-industry partnership to build a standardized, multi-State health data system. This long-standing collaborative endeavor has built and continues to develop and expand a family of databases and powerful, user-friendly software to enhance the use of administrative data. HCUP includes data on hospital discharges from participating States, as well as a nationwide sample of discharges from community hospitals. AHRQ has expanded HCUP beyond inpatient hospital settings to include hospital-based ambulatory surgery facilities, and a pilot effort is underway to capture information from emergency department databases.

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, charges incurred for hospital stays, and the resulting outcomes.

AHRQ has made available the Kids' Inpatient Database (KID), the Nation's first comprehensive database on hospital use, charges, and outcomes focused exclusively on children and adolescents. The KID contains 1.9 million pediatric discharges representing 6.7 million pediatric discharges nationwide and data on various hospital characteristics such as region, location (urban/rural), bed size, ownership, teaching status, and children's hospital status.

FY 2002 accomplishments include increasing the number of States participating in HCUP; 29 States are HCUP partners. Four new State partners joined HCUP in FY 2002: Kentucky, North Carolina, Texas, and West Virginia. They were selected based on the diversity—in terms of geographic representation and population ethnicity—they bring to the project, along with data quality and their ability to facilitate timely processing of data.

The number of States now participating in the State Ambulatory Surgery Databases (SASD), a second group of HCUP databases, increased from 9 in FY 2000 and 13 in FY 2001 to 15 in FY 2002.

Over the past several years, AHRQ has made a concerted effort to increase the accessibility of HCUP data to researchers and other interested users. A centerpiece of this

State Inpatient Databases (SID). The SID comprise non-Federal hospital discharge data from the participating States, which represent about 80 percent of the inpatient discharges in the United States.

Arizona*
Florida*
Iowa*
Maryland*
New Jersey*
Pennsylvania
Utah*
West Virginia*
California*
Georgia
Kansas
Massachusetts*
New York*
South Carolina*
Virginia
Wisconsin*
Colorado*
Hawaii
Kentucky
Michigan
North Carolina*
Tennessee
Washington*
Connecticut
Illinois
Maine*
Missouri
Oregon*
Texas

*Participants in AHRQ's designated Central Distributor or single point of contact to facilitate access to their databases.

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. About 5,800 visits are logged each month on HCUPnet. Go to www.ahrq.gov/data/hcup/hcupnet.htm to access HCUPnet.

Use of HCUP Data

The HCUP databases are being used by a variety of Federal agencies and national health care organizations to examine practices and trends and guide health care decisionmaking. Examples include:

- The Centers for Disease Control and Prevention (CDC) partners with AHRQ to incorporate HCUP NIS data in relevant *Morbidity and Mortality Weekly Reports (MMWR).* For example, in a recent (late fall 2002) MMWR, the CDC and AHRQ used HCUP NIS (1997) data to estimate the national rates of hospital discharges for lower extremity amputation (LEA), a disabling and costly procedure, among people with and without diabetes. According to the report, the age-adjusted rates of hospital discharges among people with LEA who had diabetes were 28 times higher compared with rates among people without diabetes. This higher rate underscores the need to increase efforts to address risk factors that result in LEA among people with diabetes.
- ProMedica Health System, a large, not-for-profit health system in the Northwest Ohio

and Southeast Michigan areas, used statistics in the *HCUP Fact Book on Care of Women in U.S. Hospitals, 2000*, for its initiative related to diversity in patient care. The statistics provide empirical data that will assist ProMedica in establishing baselines and benchmarking references.

- The National Institute of Allergy and Infectious Diseases (NIAID) in collaboration with AHRQ used the HCUP SID (1993-1999) to examine the effects of a rotavirus vaccine on hospital admissions among children. Rotavirus is a common cause of severe diarrhea among children and is responsible for half a million deaths in developing countries each year. After a previous study showed an increased risk of a serious and life-threatening complication (intussusception) following administration of rotavirus vaccine, the vaccine was withdrawn from the market. The NIAID and AHRQ analysis found no evidence of increased hospitalizations for intussusception during the period of vaccine availability, which suggests that the risk may be much lower than previously thought. This new information has implications for future vaccine policy.

Nationwide Inpatient Sample (NIS). NIS is the largest all-payer inpatient database in the United States. It provides information on about 7.5 million hospital stays from about 1,000 hospitals, including data for each year from 1988-2000. In 2000, 28 States participated in the NIS.

- HCUP NIS and SID (2000) data will be used in preparing the first (2003) release of the National Healthcare Quality Report, a flagship project of the agency to provide national and State-level indicators of how well our health care systems are working.
- The Substance Abuse and Mental Health Services Administration (SAMHSA) used the HCUP NIS (1988-1994) in its report on national expenditures for mental health, alcohol abuse, and other drug abuse treatment. Because HCUP is the only research database that provides hospital charge data for all types of patients, including the

State Ambulatory Surgery Databases (SASD). SASD include data on surgeries performed on the same day in which patients are admitted and released from hospital-affiliated ambulatory surgery sites. States currently participating in SASD are:

Colorado
Kentucky
Missouri
North Carolina
Tennessee

Connecticut
Maine
New Jersey
Pennsylvania
Utah

Florida
Maryland
New York
South Carolina
Wisconsin

uninsured, it allowed a comprehensive analysis on the costs of care for a wide array of mental health-related conditions, including conditions that are relatively uncommon.

- The March of Dimes uses statistics from the online HCUP database, HCUPnet, and from the *HCUP Fact Book on Hospitalizations in the United States*, in developing its resource guide, *Data Book for Policy Makers: Maternal, Infant and Child Health in the United States.* The March of Dimes updates and publishes the Data Book every 2 years, with the next edition due out in early 2003. This reference is used by policymakers and others seeking access to national and State data on a regular basis, including information on prenatal care, infant mortality, birth defects, immunization, and trends in health insurance coverage.
- The National Association of Children's Hospitals and Related Institutions (NACHRI) supported and collaborated with AHRQ in the development of a database on children's hospitalizations, the HCUP Kid's Inpatient Database (KID), the newest addition to the family of HCUP databases. Because children's hospitalizations are relatively uncommon compared with adult stays, a database that looks specifically at children's stays allows for much more detailed and accurate analyses.
- The Blue Cross/Blue Shield Association sponsored a series of reports on rising hospital costs, one of which used the HCUP SID from 10 States to look at the impact of quality on costs. The report includes State-specific rates for a number of quality indicators. According to the study, patients in both teaching and nonteaching hospitals who had unfavorable outcomes incurred higher costs than those who had favorable outcomes. For teaching hospitals, for example, the increase in costs ranged from a low of 47 percent for urinary tract infections to a high of 119 percent for wound infections.

Another means AHRQ has instituted to enhance access to HCUP data is the creation of a central distribution center for the State-level databases. Researchers and other users no longer have to contact individual States; now they can contact the HCUP Central Distributor and go one-stop shopping to obtain the data they need.

User-Friendly Software Tools for Quality Improvement

In FY 02 AHRQ launched two modules of the AHRQ Quality Indicators (QIs), a set of quality measurement software tools that can be used with any inpatient administrative data, thus making it compatible with most data systems. The AHRQ QIs are designed for use in highlighting potential quality concerns, identifying areas that need further study and investigation, and tracking changes over time. Users include providers, purchasers, policymakers, researchers, and others at the Federal, State and local levels. The software is available free on the AHRQ Web site (www.qualityindicators.ahrq.gov).

The QIs are used by health care leaders to inform:

- Collective understanding of hospital outcomes, community access to care, use of care, and costs.
- Assessments of the effects of health care program and policy choices.
- Future health care policymaking.

AHRQ QIs

Prevention QIs	16
Inpatient QIs	29

Total of 45 indicators in the first two modules.

AHRQ created the QIs in response to requests for assistance from State-level data organizations and hospital associations with inpatient data collection systems. The QIs were developed for use with information found in routine hospital administrative data, such as diagnoses and procedures, along with information on a patient's age, sex, source of admission, and discharge status.

The QIs were created by AHRQ in partnership with the University of California, San Francisco (UCSF)/Stanford Evidence-based Practice Center (EPC). Their development efforts included formal evaluation by experts in the areas of quality measurement, performance improvement, use of administrative data, and risk-adjustment, as well as feedback from various user groups.

The first two modules—the Prevention Quality Indicators (PQIs) and the Inpatient Quality Indicators (IQIs)—include a total of 45 indicators.

- **Prevention Quality Indicators (PQIs).** These indicators consist of "ambulatory care sensitive conditions." These are conditions for which evidence suggests that hospital admissions could have been avoided through high-quality outpatient care or illness could be less severe if the condition is treated early and appropriately. There are sixteen PQIs covering conditions such as diabetes, asthma, heart disease, pneumonia, and selected pediatric conditions. These indicators were released in early FY 2002 (November 2001).
- **Inpatient Quality Indicators (IQIs).** These indicators reflect quality of care inside hospitals and include inpatient mortality; use of procedures for which there are questions about overuse, underuse, or misuse; and volume of procedures for which there is evidence that a higher volume of procedures is associated with lower mortality. The IQIs include hospital and area level indicators. There are 29 indicators specific to hospital care for heart disease and surgery, hip repair, pneumonia, childbirth, and other conditions and procedures. The IQIs were released in July 2002.

Users of AHRQ QIs. The AHRQ QIs are being used by a variety of providers, purchasers, and State agencies as an integral part of quality improvement programs.

Examples of QI use include:

- **Providers:** The Dallas-Fort Worth Hospital Council (DFWHC) used the IQI software to generate comparative data and reports using 1999, 2000, and 2001 data. They published the hospital specific comparative information for their members as yearly trend reports in July 2002. The DFWHC also provided members with their own patient-level data for detailed evaluation and quality improvement activities.
- **Purchasers:** The Niagara Health Coalition used the IQI software and the New York State hospital discharge data file to generate comparative data and reports for all hospitals in the state of New York. They published these data and reports on their Web site in fall 2002.
- **State agencies:** The Texas Healthcare Information Council (THCIC) used the IQI software and their 2000 hospital discharge data to generate comparative data and reports for all hospitals in the State of Texas. They released their findings on their Web site at the close of fiscal year 2002.
- **Federal agencies:** The National Quality Forum is evaluating several AHRQ Inpatient QIs for inclusion in their initial hospital performance measurement set. The QIs are also being used for the first-ever National Healthcare Quality Report. Although the report is still in development, data from a subset of indicators from the Inpatient QIs and the Prevention QIs are being reviewed for this purpose.

Hospitals and hospital systems. AHRQ's QIs can help hospitals and hospital systems answer specific questions like these:

- How does our hospital's cesarean section rate compare with the State or the Nation?
- Do other hospitals have similar mortality rates following hip replacement?

Hospital quality reports. The Healthcare Association of New York State (HANYS)—which represents more than 500 nonprofit and public hospitals, long-term care facilities, and home health agencies–has adapted AHRQ's QIs to produce annual reports for its member hospitals. The purpose of each annual report is to provide individual hospitals with comparative data on a broad range of indicators to help them target areas for improving quality of care and efficiency. The QI outcome measures provide guidance to identify areas for further examination inside each hospital, and the QI measures of access and use serve as a springboard for regional and community health initiatives. Reports prepared for hospital systems include data for each affiliated hospital, and additional comparisons are made with data from other States.

- How does the volume of coronary artery bypass graft surgery in my hospital compare with other hospitals?

State data organizations and community health partnerships. These groups use AHRQ QIs to ask questions that provide initial feedback about clinical areas appropriate for further, more in-depth analysis, such as:

- What can the pediatric AHRQ QIs tell me about the adequacy of pediatric primary care in my community?
- How does the hysterectomy rate in our area compare with the State and national average?

State hospital associations. State hospital associations use the AHRQ QIs to do quick hospital quality and primary care access screens. Other potential users include managed care organizations, business-health coalitions, State data organizations, and others poised to begin assessments using hospital discharge data to answer questions such as:

- Can we design community interventions in areas surrounding hospitals that have high rates of diabetes-related complications?
- Which Quality Indicators can be incorporated into performance management initiatives for our member hospitals?

Federal policymakers. AHRQ QIs help these users track health care quality in the United States over time and assess whether health care quality is improving, for example:

- How does the rate of coronary artery bypass grafts vary over time and across regions of the United States?
- What is the national average for bilateral cardiac catheterization (a procedure that is not generally recommended), and how has this changed over time?

Research on Health Care for Priority Populations

Health Care for Minorities, Women, and Children

The agency's research emphasizes the needs of priority populations who generally are underserved by the health care system and underrepresented in research. Disparities in health care have been well-documented in recent decades across a broad range of medical conditions and for a wide range of populations, including racial and ethnic minorities, women, and children.

Disparities persist in health and health care for these groups, even though health care for the Nation as a whole has improved. For example:

- Cancer mortality rates are 35 percent higher in blacks than whites.
- Before age 75, women are more likely than men to die in the hospital after a heart attack, and women typically receive fewer high-technology cardiac procedures than men.
- Among diabetes patients, blacks are seven times more likely than whites to have amputations and develop kidney failure.
- Cervical cancer occurs five times as often in Vietnamese women in the United States as in white women.
- Infant mortality is nearly 2-1/2 times higher among blacks than among 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.

AHRQ has established the Office for Priority Populations Research to coordinate, support, manage, and conduct health services research on priority populations. AHRQ has a long history of conducting and supporting research on health status and health care for priority populations. Since 1999, AHRQ has funded more than 200 grants and contracts specifically related to health disparities. AHRQ is continuing a major effort, begun several years ago, to identify underlying causes of inequities in care and develop and test quality measures and quality improvement strategies that can be used to address health care disparities.

AHRQ is developing the first-ever report on prevailing disparities in health care delivery in the United States. Recent reauthorization legislation directed AHRQ to prepare and publish this report annually, beginning in 2003. This effort will be carried out in partnership with other agencies to ensure compatibility with other existing projects, including AHRQ's National Healthcare Quality Report, also in progress, Healthy People 2010, and the Department's survey integration priorities. The National Healthcare Disparities Report (NHDR) will begin to provide comprehensive answers to critical questions about disparities in health care, such as:

1. Are death rates for some inpatient procedures higher for members of certain racial/ethnic groups than for others?
2. Are blacks or Hispanics less likely than whites to receive necessary services?
3. Are uninsured patients more likely to receive surgery in hospitals with higher rates of medical errors?

For more information about the NHDR, please see page 63 of this report.

Minority Health

AHRQ has been investigating minority health issues for more than three decades. These investments in minority health services research have resulted in numerous findings that are helping us to understand the disparities experienced by racial and ethnic minorities, uncover the reasons for the disparities, and identify effective strategies for overcoming and eliminating racial/ethnic disparities.

In FY 2002, AHRQ funded about $50 million in research with a major emphasis on minority health. This effort includes continued funding of the Excellence Centers to Eliminate Ethnic/Racial Disparities (EXCEED) grants, a research effort to improve our understanding of the factors that contribute to ethnic and racial inequities in health care.

Other current AHRQ research projects focused on ways to eliminate racial disparities in health care include:

- A randomized controlled trial underway at Meharry Medical College is assessing a new method for translating prevention research into practice. A nurse-mediated, single standard of practice model is being compared with physician reminders, a more traditional approach to improving adherence to recommended prevention services. Pilot testing found the single standard of practice model to be associated with substantial, sustained improvements in preventive services delivery. Physicians within the Meharry Medical Practice Plan are following nearly 900 patients from primary care clinics serving low-income, largely Medicaid-eligible populations for 2 years to measure the frequency with which preventive services are delivered and track demographic and clinical information, as well as information on physical and social functioning. The project is addressing five priority areas for reducing disparities: infant mortality, cardiovascular disease, cancer screening, HIV/AIDS, and adult and child immunizations. The project includes a partnership between researchers at two Historically Black Colleges and Universities (Meharry Medical College and Tennessee State University) and a health care practice. The objective is to magnify and accelerate the impact of the findings on clinical practice in settings that serve Medicaid populations.
- AHRQ and the Health Resources and Services Administration are working in partnership to facilitate an assessment of the Health Disparities Collaboratives, which have been used in hundreds of HRSA's community health centers to improve the quality of care they provide for a number of chronic conditions such as asthma, diabetes, and cardiovascular disease. The results of this evaluation will be very useful to HRSA and to health care organizations around the country that are looking for ways to improve care for chronic conditions, especially in settings with large numbers of vulnerable patients.

Examples of recent findings from AHRQ-supported research in this area include:

- Recently reported data from the Medical Expenditure Panel Survey (MEPS) show that slightly more than half of Americans aged 18 and older (53.8 percent) always received urgent medical care as soon as they wanted it in calendar year 2000. Although there was very little difference between blacks and whites aged 18 to 64 in their reports of timeliness of receiving urgent care (51.5 percent and 52.9 percent, respectively), significantly fewer Hispanics (41.2 percent) reported always receiving urgent care when they wanted it.
- Data from the Healthcare Cost and Utilization Project (HCUP) demonstrated that Hispanics were significantly less likely to undergo numerous major therapeutic procedures than whites.
- Patients of various ethnic and racial groups have different attitudes toward primary care physicians. Among different Asian ethnic subgroups, Chinese and Filipino patients were less likely to be satisfied with their physicians, and Japanese patients were less likely to say they would recommend their doctor. Hispanic patients rated physicians' accessibility and technical skills less favorably than did white patients. Black patients gave physicians' use of the latest technology, promotion of healthy lifestyles, and psychosocial techniques a higher rating than white patients.

Racial/Ethnic Disparities and HIV

A nationwide study sponsored by AHRQ found that black and Hispanic patients with HIV are only about half as likely as non-Hispanic white patients to participate in clinical trials of new medications intended to slow progression of HIV.

Together, blacks and Hispanics comprise nearly half (48 percent) of the HIV population—33 percent of patients are black and 15 percent are Hispanic. Yet only 10 percent of black patients and 11 percent of Hispanic patients had participated in an HIV clinical trial, compared with 18 percent of white HIV patients. Also, black patients who did participate were more likely than other patients to drop out of the research.

These findings underscore the need to increase the diversity of trial populations. To do so, we must carefully consider research-entry criteria, enrollment and tracking procedures, and study center operations, as well as researchers' attitudes and practices. Other factors include patients' educational levels, type of insurance, and the distance patients must travel to the clinical trial site.

Women's Health

AHRQ supports research focused on improving quality, achieving better outcomes, and enhancing access to effective health care for women. One specific focus of AHRQ's women's health agenda is research that enhances active life expectancy for older women. Although women in the United States are living longer than ever before, on average they experience 3.1 years of disability at the end of life. Today, heart disease, cancer, and stroke account for more than 60 percent of deaths among American women; more than one-third of deaths among women are due to heart disease.

Although we have made progress in early diagnosis and treatment of breast cancer, this disease continues to take a heavy toll on American women, particularly older women. Approximately 185,000 new cases of breast cancer are diagnosed among U.S. women each year, and nearly 45,000 women die from the disease.

AHRQ conducts and supports research on all aspects of health care provided to women, including 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 to include a health services research component in support of the interdisciplinary focus of the programs to be developed.

AHRQ's women's health research agenda supports studies that are designed to:

- Enhance care for women with chronic illnesses and disabilities.
- Identify and reduce disparities in the health care of minority women.
- Address the health needs of women living in rural areas.

Examples of AHRQ-funded women's health research currently underway include:

- **Evidence-Based Decision Aids to Improve Women's Health.** This researcher is developing and testing a Web-based decision support tool that will help pregnant women weigh the benefits, risks, and consequences associated with various childbirth options. The goal is to improve shared decisionmaking, increase patient satisfaction, and reduce postpartum depression.
- **Variability in Interpretation of Mammograms.** In this project underway at the University of Washington, researchers are evaluating data on more than 500,000 mammograms from 91 facilities and 279 radiologists. Three geographically distinct breast cancer surveillance programs in the States of Washington, New Hampshire, and Colorado are collaborating in the study. The goal is to determine the reasons for variability among radiologists and mammography facilities in the interpretation of mammograms and to use that information to improve the quality of mammography.

- **Treatment of Noncancerous Uterine Conditions.** Researchers at the University of Maryland and the University of California, San Francisco, are conducting 5-year projects focused on the effectiveness of different treatments, such as medication and endometrial ablation, for noncancerous uterine conditions (for example, dysfunctional uterine bleeding, fibroid tumors, and endometriosis).
- **Women's Experiences of Postpartum Care.** Researchers from Brandeis University are investigating how social support, social class, and race/ethnicity affect women's experiences of postpartum services provided in the hospital and at home during the first week after uncomplicated labor and delivery. They will interview women who have given birth, physicians, midwives, and nurses on postpartum units in two hospitals, one in Toronto and one in Boston.
- **Acupuncture Treatment of Depression During Pregnancy.** In this randomized controlled study, researchers are assessing the efficacy and effectiveness of acupuncture treatment of depression during pregnancy in 180 ethnically diverse pregnant women who meet established diagnostic criteria for major depression. The acute phase of treatment consists of 16 half-hour treatment sessions delivered over 8 weeks. Participants who have full or partial response at the end of the acute phase will continue to receive treatment, although less frequently, until 10 weeks postpartum. Participants will be followed for 6 months after delivery.

Breast and Cervical Cancer

Examples of recent findings from AHRQ research on breast and cervical cancer include:

- **Outpatient mastectomy.** Outpatient complete mastectomies increased dramatically in five States between 1990 and 1996: Colorado, Maryland, New Jersey, New York, and Connecticut. AHRQ researchers uncovered two key factors that influence whether a woman gets a complete mastectomy in the hospital or in an outpatient setting: the State where she lives and who is paying for it. Women in New York were more than twice as likely, and in Colorado nearly nine times as likely, as women in New Jersey to have outpatient surgery. Nearly all women covered by Medicaid or Medicare were kept in the hospital after surgery, as were 89 percent of women who had HMO coverage.
- **Breast and cervical cancer screening in disabled women.** Researchers from Harvard Medical School found that disabled women who have difficulty walking are less likely than other women to receive Pap smears and mammograms. Contributing factors include inaccessible examination tables and mammography equipment, physician concerns about positioning the women on exam tables, inadequate or biased attitudes of clinicians regarding the women's sexuality, and time pressures on physicians in busy practices.

- **Breast cancer in older women.** More than 50 percent of all breast cancers are diagnosed in women 65 years of age and older. Yet elderly women are less inclined than younger women to get mammograms. In this study of 718 elderly breast cancer patients with newly diagnosed stage I or stage II disease at 29 hospitals in 5 regions, use of mammography was associated with earlier detection and a higher likelihood of receiving breast conserving surgery with radiation than other therapies.

- **Breast cancer screening in hard-to-reach populations.** Researchers have documented that poor and minority women receive fewer mammograms than other women. In this study, AHRQ-supported researchers used less traditional approaches—such as providing information through churches and community-based organizations—to increase mammography screenings. Over the past two decades, AHRQ has cosponsored research that supported mobile mammography screening vans, an intervention that has increased access to mammography for poor and minority women.

- **Use of telecolposcopy in rural areas.** Women who have abnormal Pap smears usually are referred for followup evaluation by traditional colposcopy (use of a magnifying instrument to examine vaginal and cervical tissue). Rural women may have to travel long distances to receive this standard of care. This AHRQ-supported research demonstrated the accuracy and efficacy of telecolposcopy—in which local doctors confer with distant experts by electronically transmitting an image of the colposcopy—in rural areas. This technology may solve the travel problem for rural women and thereby enhance their access to early diagnosis and treatment of cervical cancer.

Selected Findings from AHRQ-Supported Studies on Women's Health

1. 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.
2. 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.
3. Blacks and women have statistically significant lower odds of being referred for cardiac catheterization than whites and men.

Domestic Violence

Another major focus for AHRQ's research on women's health involves studies to improve the response of health care organizations and clinicians to victims of domestic violence, the second leading cause of injuries and death among women of childbearing age. Estimates are that 2 percent to 4 percent of all women seen in hospital emergency departments have acute trauma associated with domestic violence, and another 10 to 12 percent of women have a recent history of domestic violence. Although most injuries sustained as a result of domestic violence are classified as superficial, an estimated 73,000 hospitalizations and 1,500 deaths among women are attributed to domestic violence every year. Direct health care costs associated with domestic violence are estimated to be $1.8 billion per year.

Examples of AHRQ activities focused on domestic violence include:

- Developing a tool for assessing hospital-based domestic violence screening and intervention programs (see box for more details).
- Developing a research-based performance standard for health care provided to victims of domestic violence.
- Convening a meeting of experts to develop a health services research agenda focused on the health aspects of domestic violence. This activity is in collaboration with other HHS agencies.

AHRQ Tool Helps Hospitals Assess Their Domestic Violence Programs

AHRQ recently announced the availability of a new evaluation instrument that hospitals can use to assess the quality and effectiveness of their domestic violence screening and intervention programs. The tool asks 38 questions and provides guidance to hospitals in assessing their programs.

Hospitals can use this instrument to find out how well they are doing in:

1. Training clinicians to recognize domestic violence.
2. Screening patients to determine risk and potential for future injury.
3. Intervening, including medical treatment, victim advocacy services, and followup.

The tool was developed by AHRQ's Domestic Violence Senior Scholar-in-Residence in collaboration with the Family Violence Prevention Fund. Many nationally known experts in the field provided their expertise to the project, and the tool has been extensively field-tested.

The instrument and instructions for its use are available from AHRQ in print and on the agency's Web site at www.ahrq.gov/research/domesticviol/.

- Hosting a senior scholar-in-residence to work on projects that will provide information on the cost, quality, and outcomes of domestic violence intervention programs in health care settings.
- Developing a report to Congress on evidence-based clinical practices used by health professionals who provide care to victims of sexual assault—including child molestation—and training of health professionals in performing medical evidentiary examinations for victims of sexual assault, elder abuse, domestic violence, and child abuse and neglect.

In FY 2002, AHRQ continued four research projects begun in FY 2000 to evaluate health system responses to domestic violence. These studies are the first of their kind and move 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 are being evaluated over time to identify interventions that improve their health and safety, 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.

Children's Health

Children and adolescents are growing and developing, and their health care needs, use of services, and outcomes are very different from those of adults. Unlike adults, children and adolescents usually are dependent on parents and others for access to care and evaluations of the quality of that care. Furthermore, adolescents differ from younger children. They are moving from childhood to adulthood and have their own unique health care needs, preferences, and patterns of use.

Improving outcomes, quality, and access to health care for America's 70 million children and adolescents is a continuing priority for AHRQ. This special research focus is necessary if we are to realize improvements in the health care provided to young people of all ages.

AHRQ's work 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. A special urgency was created with implementation of the State Child Health Insurance Program (SCHIP) and our need to have better information about children's health status, their needs, and their outcomes.

To address the scarcity of quality measures for children, AHRQ is supporting the development, testing, and implementation of the new Pediatric Quality of Life Measure. Also, the National Committee for Quality Assurance adopted the children's component of AHRQ's CAHPS® survey for inclusion in HEDIS. CAHPS is the first health-planoriented survey of children to be administered nationwide. The CAHPS measure now permits users to distinguish quality of care for children with chronic illnesses and disabilities.

In FY 2002, AHRQ is supporting child-relevant studies focused on outcomes, quality and patient safety, the use and cost of care, and access to care. Researchers involved in these studies are working to:

- 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 physicians 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 Education and Research in Patient Safety in neonatal intensive care to reduce medical errors and enhance patient safety for high-risk newborns.
- Determine whether the skills acquired within a simulated environment can be put into practice in the delivery room and whether practicing 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 (finances, parents' time and availability to provide care for the child, and access/barriers to health care).

Examples of recent findings from AHRQ-supported research on children's health issues include:

- **Care for children with asthma.** National asthma care guidelines stress the importance of reducing indoor allergens and irritants that worsen childhood asthma. However, few parents in this study had adopted such environmental control measures. Researchers at Northwestern University studied 638 children (ages 3 to 15 years) with asthma; 30 percent lived in households that included a smoker, 18 percent had household pests (cockroaches or mice), and 59 percent had furry pets. Other exposures included bedroom carpeting (78 percent), increasing exposure to dust mites. Most children did not have appropriate mattress covers (65 percent) or pillow covers (84 percent) to reduce exposure to dust mites. Receipt of instructions about how to reduce environmental triggers was not associated with efforts to do so—45 percent of parents had received written instructions about avoiding asthma triggers, and 42 percent had discussed household asthma triggers with a clinician in the past 6 months. The researchers note that some household asthma triggers closely linked to housing problems (e.g., cockroaches and mold due to unrepaired leaks) may be difficult for families living in multi-unit buildings to change.

- **Lack of health insurance among adolescents.** A study of the health insurance status of a nationally representative sample of 17,670 middle and high school students found that adolescents who live outside of two-parent families are significantly more likely to be uninsured than adolescents in two-parent families. Adolescents living in households headed by grandparents are the most likely to be uninsured, according to researchers in AHRQ's Center for Cost and Financing Studies.
- **Triage of pediatric trauma victims.** AHRQ-supported researchers at Harbor-UCLA Medical Center have identified three critical factors that will help emergency medical personnel quickly and appropriately triage children involved in car crashes. The three factors are: evaluating the child's degree of consciousness (coma score), determining the extent of passenger space intrusion from the other car or object, and identifying appropriate use of seatbelt or other restraint. According to the researchers, this triage approach could potentially prevent 80 fatalities per year in children younger than 16

Selective testing finds most urinary tract infections in infants. The current recommendation is that doctors test the urine of all febrile infants younger than 3 months for urinary tract infection (UTI). Instead, many physicians test the urine of young infants with fever according to their clinical judgment rather than routinely.

Although this differs from the recommendations, a recent AHRQ study found few late diagnoses of UTIs among more than 800 infants whose urine was not initially tested and who were not initially treated with antibiotics. According to the researchers, doctors tend to order urine tests selectively, focusing on younger and more ill-appearing febrile infants and those who have no apparent fever source.

They studied the urine testing practices of 573 pediatricians from 219 practices who evaluated and treated 3,066 infants 3 months or younger with a temperature of 100.4°F or higher. Over half (54 percent) of the infants initially had their urine tested, and 10 percent of those tested had a UTI. Among 807 patients not initially tested or treated with antibiotics, only 2 had a subsequent documented UTI, and both did well. Male infants who were not circumcised had nearly 12 times the likelihood of UTI, females had 5 times the likelihood of UTI, compared with circumcised infants, and infants with a fever lasting 24 or more hours had 80 percent greater odds of developing UTI.

The researchers conclude that urine testing should focus on uncircumcised boys, girls, the youngest (bacteremia rates among infants with a UTI ranged from 6 percent in 2-3 month-old infants to 17 percent in infants younger than 1 month) and sickest infants, and those with persistent fever.

years involved in car crashes. These findings are from the largest pediatric trauma triage study of motor vehicle crashes ever conducted. It involved 8,394 children up to 15 years of age who were involved in motor vehicle crashes from 1993 through 1999.

Rapid Cycle Research

Bioterrorism Research

Following the attacks of September 11, 2001, public attention has increasingly focused on the realization that the Nation's health care system is ill prepared to respond to mass casualty incidents. This concern was heightened by the anthrax cases that followed in October 2001, which drew attention to bioterrorism and the various aspects of preparedness planning as they relate to mass casualty care due to infectious disease outbreaks.

AHRQ's bioterrorism initiative, which started in 2000 before the attacks, is a critical component of the larger U.S. Department of Health and Human Services initiative to develop public health programs to combat bioterrorism. The agency recognizes the need for a strong health infrastructure to coordinate, prepare for, and respond to acts of terrorism. To inform and assist primary care doctors and practices, community health centers, managed care organizations, emergency departments, and hospitals in meeting the health care needs of the U.S. population in the face of bioterrorist threats, AHRQ-supported research focuses on the following:

- Emergency preparedness of hospitals and health care systems for bioterrorism and other rare public health events.
- Technologies and methods to improve the links between the personal health care system, emergency response networks, and public health agencies.
- Training and information to prepare community clinicians to recognize the manifestations of bioterrorist agents and manage patients appropriately.

AHRQ's bioterrorism research is a natural outgrowth of the agency's ongoing efforts to develop evidence-based information to improve the quality of health care in the United States. Examples of products and tools that are currently or soon will be available include the following:

- Web-based training modules to teach health professionals how to address various biological agents. Separate modules exist for emergency room doctors, radiologists, pathologists, nurses, and infection control specialists. Clinicians can obtain continuing medical education (CME) credit at http://www.bioterrorism.uab.edu.

- 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.
- Use of 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.
- A new online survey that hospitals can use to assess their capacity to handle potential victims of bioterrorism attacks or for evaluating existing emergency plans. The survey covers subjects such as biological weapons training for personnel, procedures to permit rapid recognition of credentialed staff from other facilities, on-call nursing policies, and designated areas of emergency overflow for patients.

Physician preparedness. A survey taken shortly after September 11, 2001, showed that on the eve of last years' anthrax attack, three-quarters of the 614 primary care physicians surveyed said they felt unprepared to recognize bioterrorism-related illnesses in their own patients. This survey, sponsored by AHRQ and the American Academy of Family Physicians, found that 38 percent of these physicians rate their knowledge of the diagnosis and management of bioterrorism-related illnesses as poor, and only about 18 percent said that they had prior bioterrorism training.

The survey also found that being familiar with the public health system did not prepare them for knowing what to do in case of a bioterrorist attack—only 57 percent reported knowing who to call to report a suspected bioterrorism case.

These findings underscore the importance of preparedness for family physicians. Because the symptoms caused by many bioterrorism agents mimic those of common illnesses, patients may seek care first from their family physicians.

In 2002, AHRQ received over $10 million to continue its efforts to support national preparedness for a bioterrorist event. AHRQ's current bioterrorism activities continue to support departmental initiatives in the three broad areas stated previously. Through various contract mechanisms, AHRQ-funded researchers are preparing tools and models that can be exported to States and interested entities for use in their bioterrorism preparedness planning initiatives. Examples of projects currently underway include:

- Development of national guidelines for dispensing medications and/or vaccinating large populations in the event of a bioterrorist event.

- A Web-based data tool and manual that facilitates health care systems' ability to monitor and track resources that would be needed to respond to a bioterrorist event. This work will be developed with rural hospitals as a model.
- A Regional Health Emergency Assistance Line and Triage Hub (HEALTH) Model addressing the integration and communication with public health agencies and other facilities for efficient management of patient care during and after a public health emergency such as a bioterrorist event.
- Development of a report that provides an overview of current knowledge on how disaster drills and training are being conducted and evaluated for bioterrorism preparedness and a tool for evaluating disaster drills and training that can be disseminated to States and other interested groups.
- Development of information technologies available in practice-based settings for surveillance of signs and symptoms of diseases that suggest bioterrorism in pediatric and adult primary care practices.
- Convening of an AHRQ-sponsored conference focused on preparedness and disaster responses for pediatric patients.

Future research initiatives will address considerations relevant to rural preparedness, vulnerable populations, pediatric care issues, and public-private partnerships related to the use of information technology for surveillance, detection, notification alerts, and education of clinicians.

Making Timely HIV/AIDS Information Available

The HIV Research Network (HIVRN) is a network of HIV providers who pool data and collaborate on research to provide policymakers and investigators with timely information about access to and the cost, quality, and safety of HIV care; and to share information and best practices among those participating in the Network. The Network is sponsored by: AHRQ, the Substance Abuse and Mental Health Services Administration (SAMHSA), the Health Resources and Services Administration, and the Office of AIDS Research at the National Institutes of Health (NIH).

Scientific advances in recommended treatment regimens for HIV disease have the potential to profoundly improve care provided to people with HIV. Medicaid, Medicare, the Department of Veterans Affairs, and the Ryan White CARE Act spend more than $12 billion each year to treat people with HIV disease. New drugs are being developed so rapidly that data collected as recently as 3 years ago do not reflect the current situation and cannot be used reliably for tracking the resources expended or the quality of care provided to people with HIV; reliable information on these topics is critical in informing policy and clinical practice. Policymakers, service providers, and patients need to know how often people with HIV infection receive specific services and what factors are related to receiving more or fewer services. The goal of the HIVRN is to disseminate this information widely, using the most recent data that are available.

To address the need for data on the treatment of people with HIV disease, AHRQ joined with the Department's Assistant Secretary for Policy and Evaluation (ASPE), the Substance Abuse and Mental Health Services Administration (SAMHSA), and the Health Resources and Services Administration (HRSA) in 1999 to establish a pilot HIV data center at the Johns Hopkins School of Medicine. 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 the initial phase of this project, the researchers succeeded in enrolling a set of HIV care providers in different regions of the United States and in establishing procedures for transferring data on HIV-related resource use and relevant clinical parameters to the HIV Research Network. Data on over 10,000 HIV-infected patients for calendar year 1999 were transferred to the HIVRN.

In 2000, the pilot was deemed successful, NIH's Office of AIDS Research joined the collaboration, and efforts were expanded to collect data from 18 providers who treat at least 14,000 people with HIV disease. This unique dataset permits analyses looking at patient characteristics, payer variation, drug therapy regimens, number of visits, and admissions. Preliminary data analyses indicated that there are serious disparities among people with HIV disease in their ability to receive expensive new drug therapies. Specifically, analyses show:

- Monthly inpatient care averaged $423 per patient, and monthly outpatient care averaged $168 per patient.
- The cost of highly active antiretroviral therapy (HAART) was partially offset by cost reductions associated with lower use of hospital inpatient care; HAART was associated with monthly inpatient costs of $389 compared with $470 among non-HAART users.
- White HIV-infected patients (55 percent) are more likely than blacks (48 percent) or Hispanics (44 percent) to receive new and expensive drug therapies.
- Men (70 percent) are more likely than women (56 percent) to receive new and expensive drug therapies.
- Privately insured patients (61 percent) are more likely to receive new and expensive drug therapies.

Based on the promising results from the pilot project, AHRQ initiated a contract to continue this project through FY 2005.

Starting in 2002, health officials and others can access HIV health care use data online through AHRQ's HIVnet, which draws from HIVRN data. This interactive service, found at http://www.ahrq.gov/data/HIVnet.htm, provides statistical answers in real time to questions about HIV patients' use of outpatient and inpatient care by age, sex, race/ethnicity, HIV risk group, insurance status and type, protease inhibitor use, and other variables. HIVnet now has data for 1999 and 2000, and half of the data for 2001 have been added.

The HIVRN provides an ongoing means to collect 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.

Promoting Evidence-Based State and Local Health Policymaking

Outreach to State and Local Health Officials

AHRQ's User Liaison Program (ULP) synthesizes and distributes research findings to local and State policymakers so they can use it to make evidence-based decisions about health care policy. ULP holds small workshops, sponsors telephone and Web-supported audio conferences, and distributes other information to provide recent research findings to policymakers on the critical issues confronting them in today's changing health care marketplace. Topics are chosen with input from legislators, executive agency staff, and local officials.

In addition to providing information and tools to make informed health policy decisions, the ULP serves as a bridge between State and local health policymakers and the health services research community by bringing back to the Agency the research questions being asked by key policymakers. ULP workshops are user-driven, user-designed, and highly interactive, with an emphasis on information sharing between participants and presenters.

In FY 2002, ULP held 20 different activities: 10 national workshops, six State-based workshops, and four Web-assisted audio conferences. The activities were attended by 2,534 health care policymakers from all 50 States, the District of Columbia, Puerto Rico, Palau, and Guam. These activities covered a wide variety of issues such as bioterrorism, patient safety, racial/ethnic health disparities, long-term care, and rising health care costs.

AHRQ often receives feedback from workshop and audioconference participants on how they used the information shared at these events. Some examples of feedback include:

- The chairman of the Massachusetts State Senate's Committee on Health Care introduced legislation related to patient safety as a result of attending an AHRQ ULP workshop on patient safety and medical errors.
- The director of the Office of Community Health Services, Mississippi State Department of Health, shared materials and information from a ULP workshop on managed care with the State's Office of Regulation. The materials were used, along with materials from other sources, to initiate a meeting with the State Insurance Commissioner to explore how the State can carry out similar activities with its fledgling HMO industry.

The October 2000 ULP State-specific conference, Strengthening the Safety Net: A Financial Analysis of New Hampshire Community Health Centers (CHCs), sponsored by AHRQ, resulted in the State of New Hampshire undertaking a number of followup activities designed to strengthen and stabilize its CHCs. The conference was cosponsored by the New Hampshire Department of Health and Human Services, AHRQ's User Liaison Program, and the Robert Wood Johnson Foundation State Initiatives in Health Care Reform and Access Projects.

Since the October 2000 conference, a number of activities have taken place:

- A second conference was held in December 2000, "The Health of New Hampshire's Community Hospital System: A Financial and Economic Analysis." The successful event emphasized the theme of community support and collaboration in strengthening CHCs and New Hampshire's health care safety net. The State is working with its Rural Health/Primary Care Program to broadly disseminate the CHC information shared at the conference to other States.
- Joint efforts with private-sector foundations and financial officers to identify long-term capital needs, secure access to long-term sources of funding, and identify and guarantee short-term lines of credit.
- Enrollment of all eligible patients in Medicaid and the State Children's Health Insurance Program; ongoing efforts to expand private health insurance coverage to people who cannot afford insurance coverage.
- Development of new/expansion of existing partnerships between New Hampshire's community hospitals, businesses, charities, and foundations to provide direct and in-kind support to CHCs.

- Based on lessons learned at an AHRQ ULP workshop, a former member of the California State Assembly convinced the Assembly to adopt a rule whereby every pilot health program had to identify with specificity the goals of the program, quantify the goals in measurable ways, and declare what constituted success or failure.
- The Assistant City Manager and Acting Director of Public Health for the City of Fort Worth, TX, used the workbook and other materials from ULP's workshop on managed care to help local health officials conceptualize, develop, and finalize the city's plan for streamlining public health.
- One city's Department of Health and Senior Services faced a legislative mandate to make major changes in its hospital charity care program. AHRQ's ULP program provided immediate assistance by helping them understand their choices and design a workable program that could be rapidly implemented in a crisis environment.
- A ULP workshop participant from Wisconsin shared materials from Ohio and Kentucky and several of the other presentations with the State's early childhood management team, who considered the pros and cons of rolling together actual programs. Subsequently, they developed a plan to create a "children's cabinet." Their plan is now under consideration in key State agencies.
- Participants from Ohio used materials received at the AHRQ ULP workshop to help them formulate plans for creating an advisory committee of advocacy groups for adults and children with special needs. The advisory group will work with State health officials on surveying needs, disseminating information and findings from the surveys, and providing context for survey results.

Evaluating the User Liaison Program

In January 2001, AHRQ contracted with ABT Associates to evaluate the agency's User Liaison Program. ABT randomly selected high-ranking ULP program participants to determine how they used information obtained at the workshops and other programs.

- 80 percent of legislators and 89 percent of executive staff said they have used information gathered from the workshops either to improve their knowledge base on health matters or have applied it more directly and concretely in their work.
- 73 percent of legislators and 91 percent of executive staff have used the workshop notebooks after they returned home.

Research Translation for Health Care Policymaking

In 2001 and 2002, AHRQ's ULP research translation team produced research syntheses targeted to AHRQ stakeholders — the Research in Action series. The purpose of these syntheses is to share research findings and the impact the findings have had so that other stakeholders can learn from our experiences and related research from the field. AHRQ produced three research in action syntheses in 2001 and eight in 2002.

Research syntheses published in FY 2002 were titled:

- Improving Care for Diabetes Patients Through Intensive Therapy and a Team Approach
- Preventing Disability in the Elderly with Chronic Disease
- Managing Osteoarthritis: Helping the Elderly Maintain Function and Mobility
- Expanding Patient-Centered Care to Empower Patients and Assist Providers
- Medical Informatics for Better and Safer Health Care
- Improving Treatment Decisions for Patients with Community-Acquired Pneumonia
- Prescription Drug Therapies: Reducing Costs and Improving Outcomes
- Reducing Costs in the Health Care System: learning from What Has Been Done

Part 2

Financial Management

AHRQ's Financial Performance, FY 2002

Overview of Financial Performance

AHRQ's Chief Financial Officer (CFO) is responsible for overseeing all financial management activities relating to the programs and operation of the Agency, and is accountable for ensuring that financial management legislation, such as the Chief Financial Officers (CFOs) Act of 1990, the Federal Managers Financial Integrity Act (FMFIA) of 1992, and the Government Management and Reform Act (GMRA) of 1994, are implemented.

The Division of Financial Management (DFM), a component within the Office of Management (OM), takes the lead in providing services and guidance in all aspects of Agency financial management, including budget formulation and execution, funds control, appropriation legislation, and development of automated financial management systems. AHRQ purchases its fund accounting, financial reporting, debt management, and other related fiscal services from the Program Support Center's (PSC) Division of Financial Operations (DFO) on a fee-for-service basis. Because the Department prepares audited financial statements for its largest components only, AHRQ financial statements were not audited.

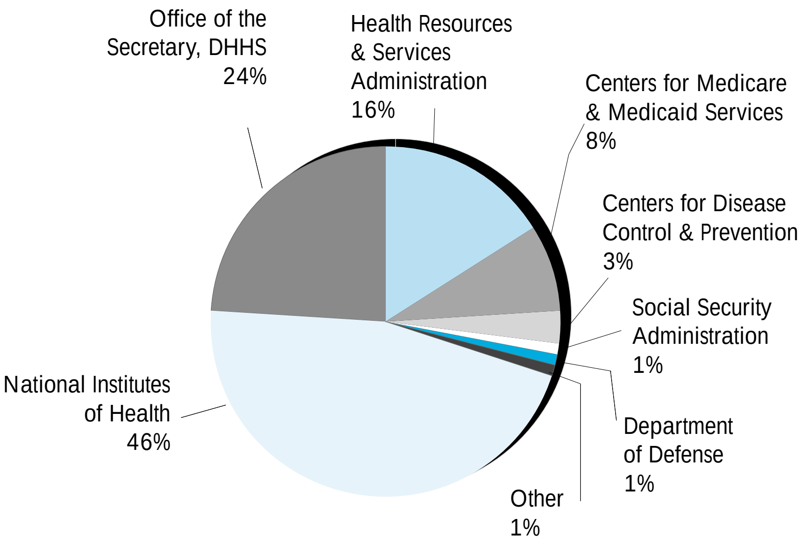
To strengthen AHRQ's management systems, procedures, and financial reporting capabilities, AHRQ entered into a contract in 2002 for technical support, consultation, and analysis of certain financial management practices within the Agency. Upon completion of this contract, which is slated for spring 2003, the contractor will provide recommendations for improving AHRQ's internal financial management processes, as well as an analysis of the Agency's compliance with applicable laws, regulations, and best practices.

Budgetary Resources

AHRQ receives its funding through an annual discretionary appropriation that includes Federal funds and miscellaneous reimbursements. The reimbursements, which are considered exchange revenue, come from other Federal agencies, usually in the form of expenditure transfers (payments made from one account to another). In FY 2002, AHRQ reimbursements totaled over $33,000,000, including $10,144,000 for bioterrorism activities and $6,545,000 for support of AHRQ's National Research Service Awards training program.

FY 2002 AHRQ Reimbursable Partners

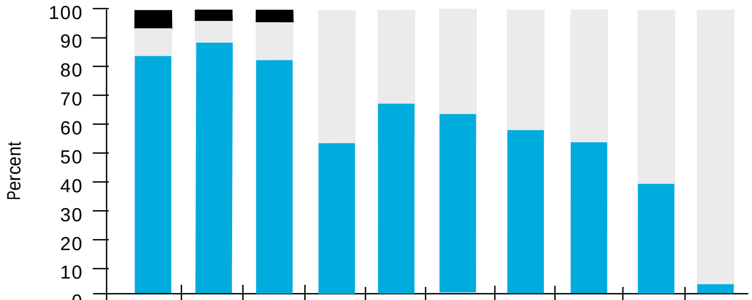
(Percentage of AHRQ Reimbursable Funds by Partner)



The Secretary of the Department of Health and Human Services is authorized to reallocate up to 1.25 percent of the funds appropriated to Department agencies in any given fiscal year. These funds are known as PHS Evaluation Funds. AHRQ's $298,730,000 FY 2002 appropriation comprised $296,145,000 in PHS Evaluation Funds and $2,585,000 in Budget Authority Funds. Because PHS Evaluation Funds are provided from the appropriations of other Department agencies, they are considered reimbursements. These funds were reflected as non-exchange revenue on AHRQ's financial statements.

AHRQ Appropiations by Funding Source

(Dollars in Millions)



	FY 93	FY 94	FY 95	FY 96	FY 97	FY 98	FY 99	FY 00	FY 01	FY 02
■ Trust Funds	$6	$6	$6	$0	$0	$0	$0	$0	$0	$0
□ PHS Evaluation	$13	$13	$18	$60	$47	$56	$71	$89	$165	$296
🟦 Budget Authority Funds	$109	$135	$135	$65	$97	$91	$100	$110	$105	$3

AHRQ also receives modest funds from Freedom of Information Act (FOIA) fees. The FOIA provides individuals with the right to request records in the possession of the Federal government, and the fees collected allow an agency to recover part of the cost associated with responding to these requests.

Mechanisms of Support

AHRQ provides financial support to public and private nonprofit entities and individuals through the award of grants, cooperative agreements, contracts, and interagency agreements (IAAs).

What determines the mechanism?

Grants and Cooperative Agreements	Used when there is a public purpose authorized by statute that must be accomplished.
Contracts	Used when the required product or service is for the direct use or benefit of the Federal government.
Interagency Agreements	Used when one Federal Agency provides to, purchases from, or exchanges goods or services with another Federal agency.

Program Announcements (PAs) are employed to invite applications for new or ongoing grant activities of a general nature, and Requests for Applications (RFAs) are used to invite grant applications for a targeted area. In FY 2002, 60 percent of AHRQ grants and cooperative agreements were in response to RFAs, and 40 percent were in response to PAs.

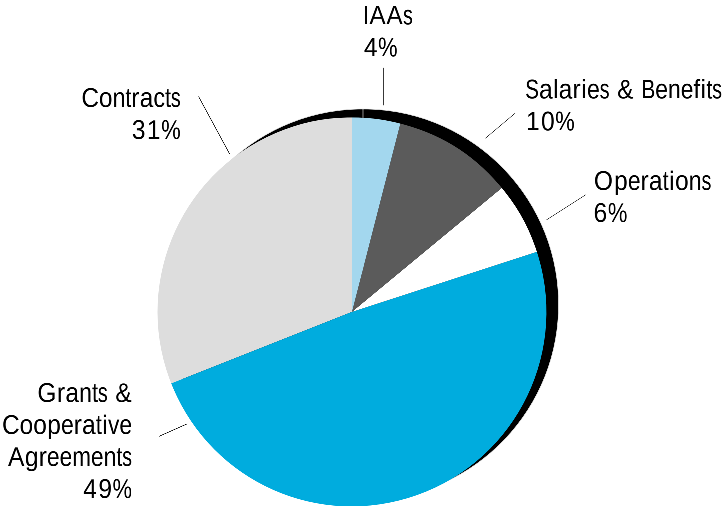
Grant applications are reviewed for scientific and technical merit by a peer review group, which is comprised of five subcommittees or study sections, each with a particular emphasis around which peer reviewer expertise is assembled. Funding decisions are based on the quality of the proposed project, availability of funds, and program balance among research areas.

AHRQ also supports small grants that facilitate the initiation of studies for preliminary short-term projects, dissertation grants undertaken as part of an academic program to earn a research doctoral degree, conference grants that complement and promote AHRQ's core research and help the Agency further its mission, and training grants that support a variety of training and career development opportunities through individual and institutional grant programs.

The Agency also awards minority supplements to ongoing grants that have at least 2 years of committed support remaining. These supplements are used to train and provide health services research experience to minorities or to support research on minority health issues.

AHRQ uses the contract and Interagency Agreement (IAA) mechanisms to carry out a wide variety of directed health services research related activities. AHRQ announces its contract opportunities by publishing Requests for Proposals (RFPs) in the *Commerce Business Daily.* Proposals received in response to these RFPs are peer-reviewed for scientific and technical merit by a panel of experts in accordance with the evaluation criteria specified in the RFP.

FY 2002 AHRQ Obligations by Mechanism



Analysis of Financial Statements

AHRQ's FY 2002 financial statements report the Agency's financial position and result of operations on an accrual basis—where transactions are recorded when they occur, regardless of when cash is received or disbursed. This method of accounting allows an accurate evaluation of operations during a given fiscal period, and takes into account future operations.

The annual financial statements include a Balance Sheet, Statement of Net Cost, Statement of Changes in Net Position, Statement of Budgetary Resources, Statement of Financing, related notes that provide a clear description of the Agency and its mission, as well as the significant accounting policies used to develop the statements, and Required Supplementary Stewardship Information.

Consolidated Balance Sheet

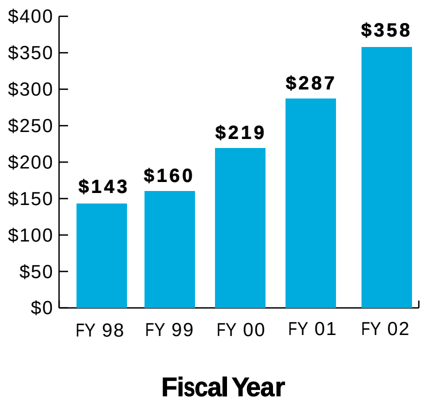
The major components of the Consolidated Balance Sheet are assets, liabilities, and net position.

Assets

Assets represent Agency resources that have future economic benefits. AHRQ's assets totaled $357.6 million in FY 2002, an increase of almost 25 percent over the FY 2001 amount of $287.5 million. The funds balances with Treasury—mostly undisbursed cash balances from appropriated funds—comprised over 99 percent of the total assets and accounted for the entire increase over FY 2001. Fund balances represent dollars maintained at the Treasury Department to pay current liabilities, accounts payable, and undelivered orders. The increase in this category was driven primarily by the steady growth of the AHRQ appropriation over the past few years. AHRQ does not maintain any cash balances outside of the U.S. Treasury and does not have any revolving or trust funds. Less than 1 percent of AHRQ's assets were made up of accounts receivable, which reflects funds owed to AHRQ by other Federal agencies under reimbursable agreements, funds owed to AHRQ by the public, or purchases of equipment less accumulated depreciation.

Fund Balance with Treasury

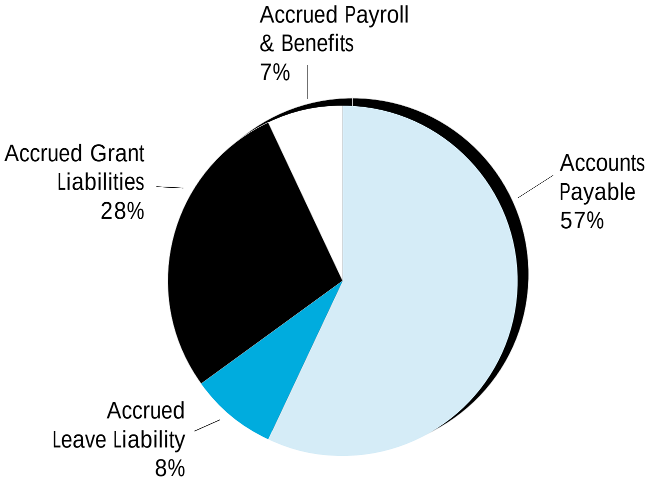
(Dollars in Millions)



Liabilities

Liabilities represent funded and unfunded activities that require future budgetary resources. Relative to assets, AHRQ has few liabilities. In FY 2002, the Agency's liabilities totaled $25.8 million, an increase of 25 percent over FY 2001. The largest liability component was accounts payable at $14.9 million, accrued grant liabilities at $7.2 million, and accrued leave and payroll/benefit liabilities at $3.8 million. Accounts payable reflect funds owed primarily for contracts and other services. Accrued grant liabilities represent the difference between grant advances paid through the Payment Management System (PMS) and estimated grant accruals for expenses incurred but not yet reported by the grantees. Grant advances are liquidated upon the grantees' reporting of expenditures. Accrued leave liabilities reflect unfunded liabilities for estimated annual leave earned but not yet paid as well as worker's compensation benefits.

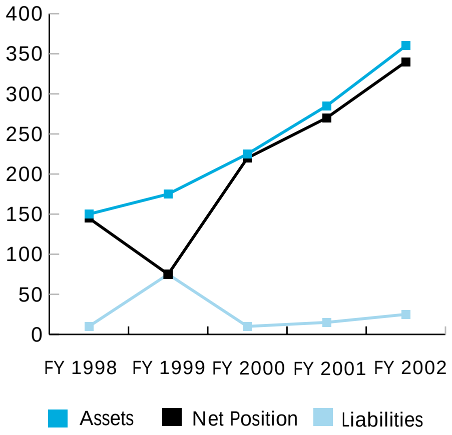
FY 2002 Liabilities By Category



Net Position

AHRQ's net position, which reflects the difference between assets and liabilities and signifies the Agency's financial condition, totaled $331.8 million, an increase of $65.0 million from FY 2001. Net position is broken into two categories: unexpended appropriations—the amount of authority granted by Congress that has been obligated but not expended ($35.3 million)— and cumulative results of operations—the net results of operations since inception plus the cumulative amount of prior period adjustments ($296.5 million). The upward change in net position between FY 2001 and FY 2002 was chiefly driven by the increase in the fund balance with Treasury.

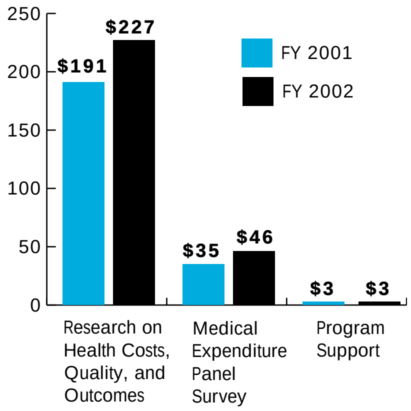
Financial Condition for Five-Year Period
(Dollars in Millions)



Consolidated Statement of Net Cost

The Consolidated Statement of Net Cost represents the net cost to the Agency. Net costs recognize costs when incurred, regardless of the year the money was appropriated. The line items on this statement reflect AHRQ's budget activities (major programs), thus making it possible to relate program costs to GPRA performance measures and other programs. AHRQ's FY 2002 net cost of operations was $275.7 million, with the Agency's Research on Health Costs, Quality, and Outcomes program comprising close to 83 percent of the total.

Net Costs Category
(Dollars in Millions)

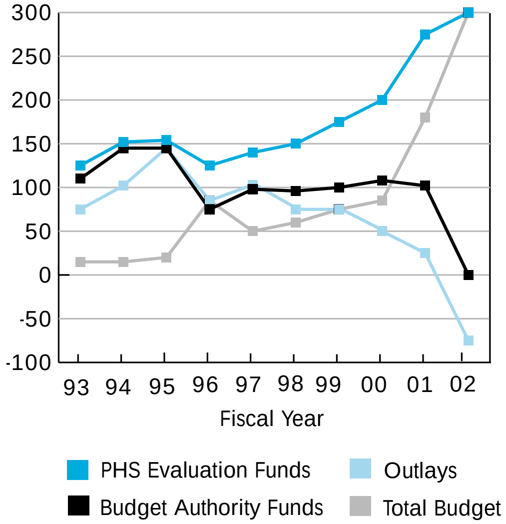


Statement of Changes in Net Position

The Consolidated Statement of Changes in Net Position reports how the Agency financed its operations as well as the amount of costs covered by imputed financing—costs paid for by others. AHRQ ended FY 2002 with a consolidated net position total of $296.5 million, which reflects $572.2 million in budgetary resources available offset by $275.7 million in net cost of operations. Non-exchange revenue totaled $336.0 million, and was made up almost exclusively of PHS Evaluation Funds. The majority of the resources available resulted from funds appropriated to AHRQ.

Statement of Budgetary Resources

The Statement of Budgetary Resources focuses on: budgetary resources available to AHRQ (appropriated and reimbursable funds), the status of those resources (obligated or unobligated), and the relationship between the budgetary resources and outlays (collections and disbursements). AHRQ's FY 2002 budgetary resources totaled $343.2 million with most of these resources coming from spending authority from offsetting collections ($331.7 million), which includes PHS Evaluation Funds and reimbursable funds received from other organizations. This statement shows that about 93 percent ($320.4 million) of the resources available in FY 2002 were obligated. AHRQ's net outlays totaled -$66.0 million: $270.8 million in disbursements less $336.8 million in collections. Because PHS Evaluation Funds are considered reimbursable funds, they are treated as collections and as such reduce disbursments. Since FY 1997, the proportion of PHS Evaluations Funds to AHRQ's total budget has steadily increased, which has resulted in a progressive decrease of AHRQ's net outlays during the same period and a negative outlay in FY 2002.

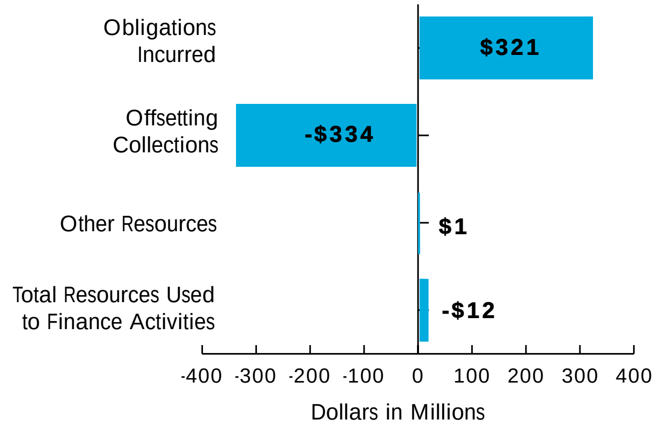


Net Costs Category
(Dollars in Millions)

Combined Statement of Financing

The Combined Statement of Financing links proprietary and budgetary accounting information and reconciles obligations incurred with the net cost of operations. While the budgetary accounting system tracks resources and the status of those resources, the financial accounting system facilitates the translation of budgetary resources into the financial statements on an accrual basis. For FY 2002, the resources used to finance AHRQ activities totaled -$12.0 million, which represents obligations incurred and any other resources used to finance activities ($321.6 million), less spending from offsetting collections (-$333.6 million). Offsetting collections principally consist of PHS Evaluations Funds.

FY 2002 Resources Used to Finance Activities



Limitations to Financial Statements

The financial statements have been prepared to report the financial position and results of the entity, pursuant to the requirements of 31 U.S.C. 3515(b).

Although these statements have been prepared from the books and records of the entity in accordance with the formats prescribed by OMB, these statements are in addition to the financial reports used to monitor and control budgetary resources, which are prepared from the same books and records.

These statements should be read with the realization that they are for a component of the U.S. Government, a sovereign entity. One key implication of this fact is that liabilities cannot be liquidated without legislation that provides the resources to do so.

Other Performance Issues

Federal Managers' Financial Integrity Act (FMFIA)

The FMFIA Act of 1982 requires that Federal agencies establish processes to develop and implement appropriate, cost-effective management controls; assess the adequacy of management controls within programs and operations; identify needed improvements; take corresponding corrective action; and submit a summary report at the end of the year. Management controls are defined as the organization, policies, and procedures used to reasonably ensure that:

- Programs achieve their intended results.
- Resources are used consistent with agency mission.
- Programs and resources are protected from waste, fraud, and mismanagement.
- Laws and regulations are followed.
- Reliable and timely information is obtained, maintained, reported, and used for decisionmaking.

In accordance with the Act, AHRQ has implemented a streamlined Management Accountability and Control Program (MACP) that uses periodic reviews, audits, and studies to provide reasonable assurance that Agency resources are protected against misappropriation, mismanagement, waste, and abuse. This program integrates efforts to meet the requirements of FMFIA with other Agency efforts to improve effectiveness and accountability.

MACP activities undertaken in FY 2002 include a review of the Agency's FTE allocation and utilization process, development of an Agency information systems security manual, establishment of an Information Technology Capital Planning and Investment Control Policy and Information Technology Investment Review Board charter, development of electronic dissemination program policy, and travel and IMPAC card audits. Based on an evaluation of these activities, AHRQ did not identify any high-risk areas, critical weaknesses, or non-conformances. The Agency does not have any financial systems as defined by FMFIA.

FY 2002 FMFIA Activities

- Conducted a semi-annual review of FTE allocation and utilization. The Agency has a uniform procedure for requesting, reviewing, and making FTE allocation decisions. The procedure, as documented, requires managers to specify the organizational need for the position, identify the specific skill and content gaps to be filled, and describe the position's relationship to objectives in the Agency's strategic plan. The process allows AHRQ to ensure that human resources are aligned with Agency strategic goals and that FTEs are allocated within budget constraints.

- Developed a Guidance Manual that provides comprehensive security policies for the AHRQ Information Systems Security Program in response to issues of concern identified in a FY 2001 Office of the Inspector General action plan completed after a general audit of AHRQ's IT Security program. The first release of this manual outlines 50 policies that relate to the full range of management, operational, and technical controls and are designed to ensure confidentiality, integrity, availability, reliability, non-repudiation, and privacy within AHRQ's IT infrastructure.
- Developed an Information Technology Capital Planning and Investment Control Policy and Information Technology Investment Review Board Charter. The Agency's IT projects now undergo review before selection to ensure the projects are technically feasible and have well-defined scopes that can be realized within the proposed cost constraints. Information technology projects undergo continual monitoring to ensure they do not veer off course, slip schedule, or exceed the approved budget for the project.
- Developed an Agency-specific policy for implementing project management in the AHRQ Electronic Dissemination Program, which will further ensure compliance with Federal and departmental requirements for IT capital planning and Internet information management as they relate to Web-based resources. The approach defined in this policy facilitates strategic planning, forecasting, and estimating of resource requirements to meet operational goals and objectives.
- Performed periodic audits of travel documentation processed through the Travel Management System to ensure that travel expenditures conform to Department and Federal travel regulations.
- Performed periodic audits of government IMPAC credit card holders, focusing on the adequacy of documentation and compliance with established procedures and regulations governing credit card usage.

The Agency remains committed to developing more efficient and effective ways to perform our mission while maintaining and protecting the integrity of the resources that have been entrusted to us. AHRQ has and will continue to use this activity as an opportunity to ensure that our financial and internal management systems and controls adequately support the accomplishment of our mission.

Information Technology

Congress has enacted several laws regarding investment in Information Technology. One of these acts is known as the Clinger-Cohen Act, passed to ensure that the Federal government investment in information technology is made and used wisely. These laws were designed to increase competition, eliminate burdensome regulations, and help the

Federal government benefit from efficient private-sector techniques. Beyond the Clinger-Cohen act, Congress has passed numerous other IT-related laws, including the Government Paperwork Elimination Act (GPEA) of 1998, and the Government Information Security Reform Act (GISRA). Under GPEA, individuals who are required to submit information to the government or maintain information must be given the option to do so electronically when practicable. Section 508 of this Act also mandated that individuals with disabilities have access to the Federal government's electronic and information technology. The Government Information Security Reform Act (GISRA), requires Federal government agencies to develop and implement comprehensive information security programs.

AHRQ's FY 2002 accomplishments toward meeting the requirements set forth in the above laws follow.

GISRA-Related Accomplishments

- Developed and used a Plan of Actions and Milestones (POA&M) as a guide for all security-related issues.
- Developed, adopted and implemented a full set of IT security policies.
- Performed an Agency-wide system security assessment.
- Updated AHRQ's Security Program Plan.
- Received positive feedback from the HHS Office of the Inspector General affirming the constructive accomplishments AHRQ achieved in FY 2002.

GPEA-Related Accomplishments

- Developed Grants-OnLine-Database (GOLD). This application includes an extensive search mechanism for the quick and efficient retrieval of information by end users along with the ability to print and save abstracts. The advent of GOLD established a vehicle that will significantly reduce the volume of hard copy requests for AHRQ grant abstracts and alleviate the time associated with preparing and distributing hard copy responses to requestors.
- Initiated the Publications Clearinghouse project, which will continue in 2003. This initiative is focused upon the reengineering of legacy Publications Clearinghouse applications as well as the establishment of new solutions to support the AHRQ publication dissemination process. The reengineered Publications Clearinghouse will significantly reduce the amount of paperwork and manual processes in the current environment. This next generation application will include an e-business solution that will enable users to search the AHRQ Publications Clearinghouse inventory and place orders online.

GPEA - Section 508-Workforce Investment Act of 1998 Accomplishments

- Implemented a comprehensive review procedure of existing and developing IT projects for compliance with section 508 provisions. These review procedures enable AHRQ to be proactive in addressing any 508-related issues and to do so before deploying any IT applications.

AHRQ also supports and participates in the Department's effort to develop a Unified Financial Management System. This system, which will replace five existing accounting systems currently in use in the DHHS, will integrate the Department's financial management structure and provide a more timely and coordinated view of critical financial management information.

President's Management Agenda

In August 2001, the President launched a Management Reform Agenda that focuses on improving the management and performance of Federal government through the following five management initiatives:

1. Strategic Management of Human Capital
2. Competitive Sourcing
3. Improved Financial Performance
4. Expanded Electronic Government
5. Budget and Performance Integration

OMB rates how well the Departments are executing the five government-wide management initiatives. To indicate the level of success in each element, the ratings follow a "stop light" approach—red for unsatisfactory, yellow for mixed results, and green for success. The Department rates each DHHS agency on their progress relative to the specific performance criteria. AHRQ's progress ratings as of July 2002 follow.

PMA Element	Progress Rating
Human Capital	Red
Competitive Sourcing	Red
Financial Management	Yellow
E-Government	Yellow
Budget and Performance Integration	Yellow

AHRQ initiated many activities in FY 2002 to address the five President's Management Agenda initiatives and plans to continue and expand upon these efforts in the coming years. A brief discussion of the PMA activities undertaken in FY 2002 follows.

Strategic Management of Human Capital

The majority of AHRQ's workforce falls within the 51-60 age group, which will translate into a significant number of retirements in the not-too-distant future. To address this situation, AHRQ's human capital initiative focuses on identifying gaps in workload and workforce to help build the workforce of the future, restructuring the existing workforce to achieve efficiencies, and placing greater emphasis on performance and accountability.

- **Strategic Workforce Planning.** AHRQ's strategic workforce planning focuses on ensuring that the appropriate workforce (size and skills) is in place to accomplish mission requirements and recognizes that the key to the successful accomplishment of our mission is our employees. To that end, AHRQ assessed future workload analyses and gaps in work activities; developed competency models to assist in recruiting, selection, development, and performance assessment activities; and developed a multi-year strategy that outlines goals and action plans that focus on how the Agency conducts its work and how well the existing structures, technology, and systems support this work. Progress to date based on the above actions includes:
    - The successful transfer of AHRQ's human resources operations and EEO programs to the Department's Program Support Center.
    - The development of recruitment and retention strategies, including the creation of an Agency brochure to be used at national meetings, job fairs, and other venues, as well as partnering with PSC to upload employment opportunities on the HHS careers Web site.
    - Completion of the initial phase of the reengineering of the Agency's grant process.
- **Workforce Restructuring.** AHRQ is employing a three-phase approach to achieve desired Department-wide workforce restructuring through administrative consolidation, management delayering to achieve economies of scale and reduce the levels of hierarchy, and redirection of human capital toward mission-related activities. Based on this approach, AHRQ reduced the number of supervisors/managers by 20 percent through FY 2002. As a result, the supervisor-to-staff ratio increased from 1:8.6 in FY 2000 to 1:12.1 in FY 2002. Additional organizational streamlining, including functional realignments and eliminating other supervisory positions, is also in the planning stages.

- **Accountability.** AHRQ established performance contracts for the Agency Director and all senior management officials that report directly to the Director. The Agency will use its documented performance management procedures to ensure that the performance-based contract process cascades to the general workforce beginning with the calendar year 2003 performance cycle.

Competitive Sourcing

The Federal Activities Inventory Reform (FAIR) Act directs Federal agencies to issue each year an inventory of all commercial activities performed by Federal employees, e.g., those activities that are not inherently governmental. The maintenance, periodic review, and preparation of the Agency"s FAIR Act Inventory are done centrally in AHRQ"s Office of Management. This ensures that the guidance provided in OMB Circular A-76 and related policy and guidance is applied consistently across all Agency activities.

AHRQ submitted its 2002 FAIR Act Inventory to the Assistant Secretary for Administration and Management (ASAM) well within the prescribed timeframe. The inventory is complete and accounts for all FTEs. Adjustments were subsequently made to the inventory to apportion more accurately personnel between commercial and inherently governmental positions in accordance with the common departmental definitions established by ASAM. The AHRQ Inventory was published in the *Federal Register* on October 17, 2002, at 65FR64150-51. No challenges were received.

AHRQ did not list any FTE for study or conversion in FY 2002, nor were any proposed initially for FY 2003. However, AHRQ is currently working with ASAM to identify competitive sourcing candidates from the revised inventory and with the Program Support Center to identify resources to assist AHRQ in developing a FY 2003 Competition Schedule that is consistent with Department-wide workforce restructuring goals. The AHRQ staff person responsible for coordinating Agency FAIR Act/Competitive Sourcing activities has participated in HHS-sponsored training and continues to develop subject matter expertise to manage more effectively the Agency's responsibilities in this area.

It should be noted that AHRQ already contracts out a significant portion of its support services including information technology; public affairs, writing and editing; publication distribution (clearinghouse); library services; human resource management support; fund accounting and other fiscal services; research review, and meeting and conference support.

Improved Financial Performance

Federal managers are experiencing growing pressures from their executive leaders, Congress, the public, and their customers to achieve more under the programs they manage. AHRQ continues to strive to provide sound financial information by concentrating on how our financial data can be more easily accessible and of use to our program managers and customers.

- **Internal Control Improvements.** In addition to our continued FMFIA efforts, the Agency recognizes that the best approach to enhance financial accountability and promote improved processes is to subject an organization to an independent review of its financial management practices. With that in mind, AHRQ entered into a contract for technical support, consultation, and analysis of certain financial management practices within the Agency, including identifying accountability standards applicable to an agency participating in the Department's top-down audit approach.
- **Unified Financial Management System (UFMS).** The Agency continues to support the development and implementation of the Department's Unified Financial Management System (UFMS). AHRQ has members on the Steering Committee and the Planning and Development Committee, and participates in the Global Business Process Design Workshops and related meetings. The goal of the UFMS is to make consolidated financial reporting much less complex by combining data through a centralized, HHS-wide consolidated financial reporting capability. UFMS will also take full advantage of modern accounting system features such as enhanced internal controls, data standardization, improved user security, and flexible query and reporting capabilities.

Expanded Electronic-Government

The President's Management Agenda calls for an emphasis by Federal agencies on Electronic Government (e-Government), using the resources and opportunities of a Web-enabled environment to bring government closer to the people, enable it to be more responsive to public concerns, and improve the accessibility of government-generated information and services. In 2002, AHRQ began development of an integrated e-Government program with the goal of increasing gains in business performance. These activities centered on establishing the foundation for e-Government implementation and focused primarily on developing a comprehensive body of information technology policy.

The four cornerstones of this initiative and our progress to date follow.

Initiative Cornerstones	Progress To Date
Customer Relationship Management: Knowing who our customers are, what they want, and how to best meet their needs.	• Completed an assessment of AHRQ's major categories of customers. • Carried out business process assessments of key business lines.
Organization Capability: Building sound procedures into the everyday workings of the organization that enable well-thought-out business decisions to insure that IT investments are made that truly support the mission of the Agency.	• Established information technology project accountability and capital planning governance. • Established an internal IT investment review board to insure that IT investments are in harmony with the Agency's mission. • Started to integrate the iterative processes of capital planning into the normal business operations of the Agency — select, review, develop and evaluate.
Security/Privacy: Gaining customer trust so they know that information is used only for its intended purpose and that the information is secure, stable, and not vulnerable to intrusion.	• Established security and privacy governance. • Completed the second cycle of the National Institute of Standards and and Technology self-assessments. • Completed risk assessments of seven of AHRQ's mission-critical systems.
Enterprise Architecture: Developing a robust Enterprise Architecture starts with closely examining the Agency's strategic plan and ends by ensuring that every IT investment directly supports some facet of the strategic plan and underlying Agency performance objectives. This approach assures that business operations and IT investments are fashioned as a comprehensive partnership.	• Established Enterprise Architecture planning function within the CIO's office. • Implemented the Enterprise Architecture Management System, a software application (also in use at OMB) for building a comprehensive Enterprise Architecture (EA) — as explained above — EA is the detailed view of how the IT investments are supporting the strategic goals and performance of the Agency.

Budget and Performance Integration

This initiative builds on the Government Performance and Results Act of 1993 (GPRA), which requires Federal agencies to develop strategic plans describing their overall goals and objectives, annual performance plans containing quantifiable measures of their progress, and performance reports describing their success in meeting those standards and measures. AHRQ's strategic plan guides the overall management of the Agency. Each Office and Center has individual strategic and operations plans, and the operations plans identify critical success factors that illustrate how each O/C contributes to AHRQ achieving its strategic and annual performance plan goals. At the end of each year, the Office and Center Directors and their staffs review their accomplishments in relation to the annual operations plans. The results of the reviews contribute significantly to the performance reports, which are influential in revising the operations plans and in turn, the Agency strategic plan.

- **Management Structure.** AHRQ's commitment to budget and performance integration is reflected not only in how programs are evaluated but also in the organizational structure of the Agency. AHRQ is pursuing reorganizing its management structure by aligning budget formulation, execution and financial management with planning, program development and evaluation.
- **Interface of Automated Systems.** AHRQ is exploring the interconnection of appropriate areas of AHRQ's planning and budget automated systems, with the ultimate goal being the targeted integration of the existing Agency planning database and budget database systems.
- **Performance Assessments.** In accordance with PART, OMB's Program Assessment Rating Tool for the formal evaluation of Federal programs, we completed comprehensive program assessments of two key Agency programs in FY 2002: Data Collection and Dissemination, which includes the Medical Expenditure Panel Survey (MEPS), the Healthcare Cost and Utilization Project (HCUP), and the Consumer Assessment of Health Plans Study (CAHPS); and the grant component of AHRQ's Translation of Research into Practice (TRIP) program.

AHRQ's review of these programs provides the basis for the Agency to move forward in more closely linking high quality outcomes with associated program costs. Over the next few years, AHRQ will continue to work towards integrating financial management of our programs with their performance, with the definitive goal being to use the performance data to better inform budget decisions for AHRQ programs.

Financial Statements

U.S. Department of Health and Human Services
Agency for Healthcare Research and Quality
CONSOLIDATED BALANCE SHEET
As of September 30, 2002 and 2001
(in thousands)

Assets	2002	2001
Intragovernmental		
Fund Balance with Treasury (Note 2)	$356,423	$286,778
Accounts Receivable, Net (Note 3)	800	1
Total Intragovernmental	357,223	286,779
Accounts Receivable, Net (Note 3)		252
Advances and Prepayments		1
Property and Equipment, Net (Note 4)	375	435
Total Assets	$357,598	$287,467
Liabilities		
Intragovernmental		
Accounts Payable	$2,467	$1,757
Accrued Payroll and Benefits	359	311
Total Intragovernmental	2,826	2,068
Accounts Payable	12,463	9,706
Accrued Payroll and Benefits	1,435	1,243
Accrued Grant Liability (Note 5)	7,224	4,967
Actuarial FECA Liability (Note 6)	516	439
Accrued Leave Liability (Note 6)	2,010	1,899
Liability for Deposit Funds (Note 6)	(679)	328
TOTAL LIABILITIES	25,795	20,650
NET POSITION		
Unexpended Appropriations	35,314	89,680
Cumulative Results of Operations	296,489	177,137
TOTAL NET POSITION	331,803	266,817
TOTAL LIABILITIES AND NET POSITION	$357,598	$287,467

The accompanying notes are an integral part of these statements.

Department of Health and Human Services
Agency for Healthcare Research and Quality
CONSOLIDATED STATEMENT OF NET COST
For the Fiscal Years Ended September 30, 2002 and 2001
(in thousands)

	2002	2001	**Restated 2001**
CURRENT PROGRAMS			
Research on Health Costs, Quality, and Outcomes	$227,432	$11,018	**$190,843**
Medical Expenditure Panel Survey	45,698	35,555	**35,555**
Program Support	2,545	2,509	**2,509**
Totals - Current Programs	$275,675	$49,082	**$228,907**
NET COST OF OPERATIONS	$275,675	$49,082	**$228,907**

The accompanying notes are an integral part of these statements.

Department of Health and Human Services
Agency for Healthcare Research and Quality

CONSOLIDATED STATEMENT OF CHANGES IN NET POSITION

For the Fiscal Year Ended September 30, 2002
(in thousands)

	2002 Cumulative Results of Operations	2002 Unexpended Appropriations
1. Beginning Balances	$177,137	$89,680
2. Prior period adjustments		
3. Beginning Balances, As Adjusted	177,137	89,680
Budgetary Financing Sources:		
4. Appropriation received		2,600
5. Appropriations transferred-in/out (+/-)		
6. Other adjustment	19,952	(19,057)
7. Appropriations used	37,909	(37,909)
8. Nonexchange revenue	336,015	
9. Donations and forfeitures of cash and cash equivalents.		
10. Transfers-in/out without reimbursement		
11. Other budgetary financing sources		
Other Financing Sources:		
12. Donations and forfeitures of Property		
13. Transfers-in/out without reimbursements		
14. Imputed financing from costs absorbed by others	1,167	
15. Other	(16)	
16. Total Financing Sources	395,027	(54,366)
17. Net Cost of Operations	275,675	
18. Ending Balances	$296,489	$35,314

The accompanying notes are an integral part of these statements.

U. S. Department of Health and Human Services
Agency for Healthcare Research and Quality
STATEMENT OF BUDGETARY RESOURCES
For the Fiscal Year Ended September 30, 2002
(in thousands)

Budgetary Resources:	
1 Budget Authority	
Appropriations Received	$2,600
Net Transfers	
Other	1,767
2 Unobligated Balances - Beginning of Period	
Beginning of Period	5,196
Net Transfers	
Earned	
Collected	223,024
Receivables from Federal Sources	
Change in Unfilled Customer Orders	
Advance Received	113,728
Without Advance from Federal Sources	(5,022)
Anticipated for Rest of Year	
Subtotal	31,730
4 Recoveries of Prior Year Obligations	1,884
5 Temporarily Not Available Pursuant to Public Law	
6 Permanently Not Available	(15)
Total Budgetary Resources	$343,162
Status of Budgetary Resources:	
8 Obligations Incurred	
Direct	$4,467
Reimbursable	315,958
Subtotal	320,425
9 Unobligated Balances - Available	
Apportioned	8,567
10 Unobligated Balances - Not Available	14,170
11 **Total Status of Budgetary Resources**	$343,162

STATEMENT OF BUDGETARY RESOURCES (continued)

Relationship of Obligations to Outlays:	
12 Obligated Balance, Net- Beginning of Period	289,128
13 Obligated Balance Transferred, Net	
14 Obligated Balance, Net - End of Period	
Accounts Receivable (-)	
Unfilled Customer Orders from Federal Sources (-)	(800)
Undelivered Orders	326,018
Accounts Payable	16,720
15 Outlays	
Disbursements	270,752
Collections (-)	(336,752)
Sub-Total	(66,000)
Less: Offsetting Receipts	
Net Outlays	$ (66,000)

The accompanying notes are an integral part of these statements.

U. S. Department of Health and Human Services
Agency for Healthcare Research and Quality
COMBINED STATEMENT OF FINANCING
For the Fiscal Year Ended September 30, 2002
(in thousands)

Resources Used To Finance Activities:	
Budgetary Resources Obligated	
1 Obligations Incurred	$320,425
2 Less: Spending from Offsetting Collections and Recoveries	333,614
3 Obligations Net of Offsetting Collections and Recoveries	(13,189)
4 Less: Offsetting Receipts	
5 Net Obligations	(13,189)
Other Resources	
6 Donations and Forfeitures of Property	
7 Transfers In/Out Without Reimbursements	
8 Imputed Financing	1,167
9 Other Resources	(16)
10 Net Other Resouces Used to Finance Activities	1,151
11 Total Resources Used to Finance Activities	$ (12,038)
Resources Used to Finance Items Not Part of the Net Cost of Operations	
12 Change in Budgetary Resouces Obligated for Goods, Services and Benefits Ordered but not Yet Provided	63,997
13 Resources that fund expenses recognized in prior periods	
14 Budgetary offsetting collections and receipts that do not affect net cost of operations	
14a. Credit program collections which increase liabilities for loan guarantees or allowance for subsidy	
14b. Other budgetary collections & receipts	(336,015)
15 Resources that finance the acquisition of assets	
16 Other resources or adjustments to net obligated resources that do not affect net cost of operations	120
17 Total resources used to finance items not part of the net cost of operations	(271,898)
18 Total resouces used to finance the net cost of operations	$259,860

COMBINED STATEMENT OF FINANCING (continued)	
Components of the Net Cost of Operations that will not Require or Generate Resouces in the Current Period:	
Components Requiring or Generating Resouces in Future Periods:	
19 Increase in Annual Leave Liability	111
20 Increase in environmental and disposal liability	
21 Upward/Downward reestimate of credit subsidy expense	
22 Increase in exchange revenues receivable from the public	
23 Other	
24 Total components of Net Cost of Operations that will require or generate resources in future periods.	111
Components not Requiring or Generating Resources:	
25 Depreciation and amortization	117
26 Revaluation of assets or liabilities	
27 Other	15,586
28 Total components of Net Cost of Operations that will not require or generate resources	15,703
29 Total components of net cost of operations that will not require or generate resources in the current period	15,814
30 Net Cost of Operations	$275,675

The accompanying notes are an integral part of these statements.

Notes to Financial Statements

Note 1 - Significant Accounting Policies

Basis of Presentation

The financial statements of the Agency for Healthcare Research and Quality (AHRQ) have been prepared from its accounting records to report its financial position, net cost, changes in net position, budgetary resources, and reconciliation of net cost to budgetary resources. Such financial statements have been prepared in accordance with generally accepted accounting principles (GAAP), and the form and content requirements specified by the Office of Management and Budget's (OMB) Bulletins entitled *Form and Content of Agency Financial Statements* (No. 97-01, as amended, and the portions of No. 01-09 that are required to be implemented in fiscal 2002). GAAP for Federal entities are the standards prescribed by the Federal Accounting Standards Advisory Board (FASAB), which has been designated as the official accounting standards-setting body for the Federal Government by the American Institute of Certified Public Accountants.

AHRQ uses both the accrual basis and budgetary basis of accounting to record transactions. Under the accrual basis, revenues are recognized when earned, and expenses are recognized when a liability is incurred, without regard to receipt or payment of cash. These financial statements were prepared following accrual accounting. Budgetary account balances are included in certain statements as appropriate. Budgetary accounting principles ensure that funds are obligated according to legal requirements. Balances on these statements may therefore differ from those on financial reports prepared pursuant to other OMB directives that are primarily used to monitor and control AHRQ's use of budgetary resources.

Reporting Entity

The AHRQ is an operating division (OPDIV) of the Department of Health and Human Services (HHS), which is a Cabinet agency of the Executive Branch of the United States Government. The AHRQ, formerly known as the Agency for Health Care Policy and Research (AHCPR), was established in December 1989 under Public Law 101-239, Omnibus Budget Reconciliation Act of 1989, to enhance the quality, appropriateness, and effectiveness of health care services and access to these services. The agency's mission is to generate and disseminate information to improve the health care system. AHRQ is structured into the following 11 major functional components:

- Office of the Director
- Office of Management
- Office of Priority Populations Research
- Office of Research Review, Education, and Policy

- Office of Health Care Information
- Center for Cost and Financing Studies
- Center for Organization and Delivery Studies
- Center for Outcomes and Effectiveness Research
- Center for Primary Care Research
- Center for Practice and Technology Assessment
- Center for Quality Improvement and Patient Safety

The office of HHS's Chief Financial Officer (CFO) provides Department-wide accounting policy oversight. The Division of Financial Operations (DFO) of the Program Support Center (PSC) provides the accounting and fiscal services, including the preparation of the financial statements, on a fee-for-service basis. DFO is considered part of AHRQ's management.

AHRQ maintains only appropriated funds. The appropriated accounts may include 1-year, multi-year, and indefinite authority. In addition, AHRQ also uses a number of receipt, deposit, and budget-clearing accounts. The financial statements report activity for the appropriated funds listed below. Also included are the related appropriation account symbols and such activity is considered a health research and training function. AHRQ's programs are designated by OMB as falling under the health budget function category. Of AHRQ's net cost of $276,000, only $29,000 was determined to be payments within the Government.

Appropriations

75X1700	Agency for Healthcare Research and Quality
75 1700	Agency for Healthcare Research and Quality

Budgets and Budgetary Accounting

Financing sources are provided through Congressional appropriations on an annual, multi-year and no-year basis or through reimbursable agreements. Annual appropriations are available for incurring obligations during a specified year; and multi-year appropriations are generally available for multiple years. No-year or "X-year" appropriations are available for obligations until the purpose for which they are provided is carried out, and therefore, they are for an indefinite period. For financial statement purposes, appropriations are recognized as financing sources as expenses are incurred.

Reimbursable service agreements generally recognize revenues when goods are delivered or services rendered between AHRQ and other Federal agencies, OPDIVs, and the public. In addition, other financing sources are provided in the form of gifts from the public, interest on investments, and non-exchange revenues. All of these financing sources may be used to finance operating expenses and for capital expenditures, as specified by law.

Use of Estimates in Preparing Financial Statements

The preparation of financial statements, in conformity with generally accepted accounting principles, requires management to make estimates and assumptions. These estimates affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements and the amounts of revenues and expenses during the reporting period. Actual results may differ from these estimates.

Fund Balances with the U. S. Treasury

AHRQ maintains all cash accounts with the U.S. Treasury. The account "Fund Balance With Treasury" represents appropriated, revolving, trust and other funds available to pay current liabilities. The U.S. Treasury processes cash receipts and disbursements for AHRQ.

Accounts Receivable and Earned Revenues

Accounts receivable, including interest receivable, consist of amounts owed to AHRQ by other Federal agencies and the public. These balances are presented net of allowances for uncollectable accounts, if needed. The allowance estimates are based on past collection experience and/or an aging analysis of the outstanding balances.

Accrued Grants

Accrued grants generally are classified as non-block grants. Non-block grantees draw funds to meet their immediate cash needs, and the grantees report actual disbursements (cash expenditures) quarterly. Hence, the year-end accrual for non-block grants is equal to the estimate of the fourth quarter disbursements, plus an average of 2 weeks' expenditures for expenses incurred prior to cash withdraws.

Property and Equipment

Equipment includes medical, administrative, and automated data processing equipment. Equipment is capitalized at cost if the initial acquisition cost is $25 or more. All transactions are maintained in AHRQ's Property Management System.

Depreciation on equipment, buildings, and capital improvements is computed using the straight-line method based on the useful life of the assets with one-half year's depreciation taken in year of acquisition. Property and equipment is depreciated as follows: Equipment over useful lives ranging from 5 to 15 years, ADP Software for 5 years, and structures, facilities, and capital improvements ranging from 6 to 40 years. Class lives for all property are based on an Internal Revenue Service classification system. Land is not depreciated. Routine maintenance and repair costs are expensed as incurred.

Liabilities

Liabilities are recognized for amounts of probable future outflows or other sacrifices of resources as a result of past transactions or events. Since AHRQ is a component of the U. S. Government, a sovereign entity, its liabilities cannot be liquidated without legislation that provides resources to do so. Payment of all liabilities other than contracts can be abrogated by the sovereign entity.

Unfunded liabilities are incurred when funding has not yet been made available through Congressional appropriations or current earnings. AHRQ recognizes such liabilities for employee annual leave earned but not taken and amounts billed by the Department of Labor (DOL) for the worker's compensation benefits. In accordance with Public Law and existing Federal accounting standards, a liability is not recorded for any future payment made on behalf of current workers contributing to the Medicare Hospital Insurance Trust Fund.

FECA Liability

The liability for future workers' compensation benefits includes the expected liability for death, disability, medical, and miscellaneous costs for approved compensation cases. The amount of this liability is provided to AHRQ by DOL's Employment Standards Administration, pursuant to the Federal Employees' Compensation Act (FECA). The liability is determined using a method that utilizes historical benefit payment patterns, related to a specific incurred period, to predict the ultimate payment related to that period.

Consistent with past practice, these projected annual benefit payments have been discounted to present value using the OMB's economic assumptions for 10-year Treasury notes and bonds. Interest rate assumptions utilized economic assumptions for 10-year Treasury notes and bonds. Accordingly, discounting is 5.2% for year one and thereafter.

Employee Leave

Annual leave is accrued as it is earned, and the accrual is reduced as leave is taken. Each year, the balance in the accrued annual leave account is adjusted to reflect current pay rates. To the extent that current or prior year funding is not available to cover annual leave earned but not taken, funding will be obtained from future financing sources. Sick leave and other types of non-vested leave are expensed as taken. Any liability for sick leave that is accrued but not taken by a CSRS-covered employee is transferred to the Office of Personnel Management upon the retirement of that individual. No credit is given for sick leave balances upon the retirement of FERS-covered employees.

Retirement Plans

Most AHRQ employees participate in the Civil Service Retirement System (CSRS) or the Federal Employees Retirement System (FERS). Under CSRS, AHRQ makes matching contributions equal to 7.4 percent of basic pay. Under FERS, AHRQ contributes the employer's matching share for Social Security and an amount equal to 1 percent of the employee's pay to a savings plan. AHRQ will also match an employee's savings plan contribution up to an additional 4 percent of pay. Employees hired after December 31, 1983 are automatically covered by FERS. The Office of Personnel Management (OPM) is responsible for reporting on CSRS and FERS plan assets, accumulated plan benefits, and unfunded liabilities, if any, applicable to Federal civilian employees.

Commissioned officers participate in the PHS Commissioned Corps Retirement System. The PSC reports the retirement pension and post-retirement medical benefit liabilities applicable to all Commissioned Corps employees in the financial statements of PSC.

The FASAB's SFFAS Number 5, "Accounting for Liabilities of the Federal Government," requires that employing agencies recognize the full cost of pensions, and health and life insurance benefits during their employees' active years of service. OPM, as the administrator of the CSRS and FERS plans, the Federal Employees Health Benefits Program, and the Federal Employees Group Life Insurance Program, must provide the "cost factors" that adjust the agency contribution rate to the full cost for the applicable benefit programs. Accordingly, an imputed financing source and corresponding imputed personnel cost are reflected in the Statements of Changes in Net Position, the Statements of Net Costs, and the Statements of Financing, respectively. These imputed balances do not affect AHRQ's net position.

Payroll Processing

The HHS centralized payroll system (i.e. Accounting for Pay System) computes employee payroll and benefits.

Obligations Related to Canceled Appropriations

Payments may be required of up to 1 percent of current year appropriations for valid obligations incurred against prior canceled appropriations. We are not aware of any valid obligations incurred against cancelled appropriations. One percent of current year appropriations are $1,176 and $3,470 as of September 30, 2002 and 2001, respectively.

Contingencies

A contingency is an existing condition, situation, or set of circumstances involving uncertainty as to possible gain or loss to the Department/OPDIV. The uncertainty will ultimately be resolved when one or more future events occur or fail to occur. With the exception of pending, threatened, or potential litigation, a contingent liability is recognized when a past transaction or event has occurred, a future outflow or other sacrifice of resources is more likely than not, and the related future outflow or sacrifice of resources is measurable. For pending, threatened, or potential litigation, a liability is recognized when a past transaction or event has occurred, a future outflow or other sacrifice of resources is likely, and the related future outflow or sacrifice of resources is measurable.

Note 2 - Fund Balances with Treasury

The aggregate amounts of AHRQ's accounts with the U. S. Treasury for which AHRQ is authorized to make expenditures and pay liabilities are listed below by fund types as of September 30, 2002 and 2001. The funds classified as Other include balances in the deposit, suspense, and clearing accounts.

	2002	2001
Fund Types:		
Appropriated	$357,439	$286,892
Other	(1,016)	(114)
Total	**$356,423**	**$286,778**
Status of Fund Balance with Treasury		
Unobligated Balance		
Available	$8,567	$1,312
Unavailable	14,170	3,884
Obligated Balance not yet Disbursed	333,686	281,582
Total	**$356,423**	**$286,778**

Unobligated balances are either available for obligation or not available (permanently or temporarily) pursuant to a specific provision in law. Obligated balance not yet disbursed or undelivered orders represent appropriations obligated (i.e. legally reserved) for the amount of goods or services ordered but not yet received. The "Unobligated Balances Unavailable" above include appropriations of approximately $15 in 2002 and $0 in 2001 not available pursuant to public law.

Note 3 - Accounts Receivable, Net

Aged receivables are reviewed periodically to determine their collectibility. Intra-OPDIV eliminations relating to accounts receivable are immaterial. Receivables at September 30, 2002 and 2001 are as follows:

	2002			2001		
	Accounts Receivables Principal	**Allowance**	**Net Accounts Receivable**	**Accounts Receivables Principal**	**Allowance**	**Net Accounts Receivable**
Intragovernmental	$800	$-	$800	$ 1	$-	$ 1
From the public				1000	(748)	252
Total	**$800**	**$**	**$800**	**$1,001**	**$(748)**	**$253**

Note 4 – General Property, Plant, and Equipment, Net

Most buildings occupied by AHRQ are provided by the General Services Administration (GSA). GSA charges AHRQ a Standard Level Users Charge (SLUC) which approximates commercial rental rates for similar properties. Expense for SLUC was approximately $3,800 in 2002 and $2,600 in 2001.

	2002			2001		
	Acquisition Cost	Accumulated Depreciation	Book Value	Acquisition Cost	Accumulated Depreciation	Book Value
Land	$	$-	$	$	$-	$
Equipment	635	(260)	375	744	(309)	435
Total	**$635**	**$(260)**	**$375**	**$744**	**$(309)**	**$435**

Note 5 - Accrued Grant Advance

Accrued Grant Advances relate to grant program funds provided primarily to universities and nonprofit organizations. Grant recipients are paid through the Division of Payment Management's (DPM) Payment Management System (PMS), the manager of HHS's central grants payment system.

Grant advances are liquidated upon the grantee's reporting of expenditures on the quarterly SF-272 Report, Federal Cash Transaction Report. In many cases, these reports are received several months after the grantee actually incurs the expense reported therein. AHRQ adopted a Department-wide accrual methodology to estimate and accrue amounts due grantees for their expenditures made through September 30th, for which expenditure reports (principally SF-272 reports) had not been received from such grantees as of September 30th and had not been reported by that date. These estimated accrual amounts were determined by DPM.

Advances and prepayments at September 30, 2002 and 2001 are summarized as follows:

	2002	2001
Grant advances outstanding	$32,902	$19,838
Less estimated accrual for amounts due to grantees	(40,126)	(24,805)
Net grant advance liability	**$(7,224)**	**$(4,967)**

Note 6 – Liabilities Not Covered by Budgetary Resources

	2002	2001
Accrued FECA liability	$ 516	$ 439
Accrued leave	2,010	1,899
Liability for deposit funds	(679)	328
Total liabilities not covered by budgetary resources	1,847	2,666
Total liabilities covered by budgetary resources	23,948	17,984
Total liabilities	**$25,795**	**$20,650**

Note 7 - Grant Awards

The Single Audit Act of 1984, as revised, provides that recipients receiving $300 or more in Federal financial assistance have an annual audit of its activities performed by an independent non-Federal auditor. The result of these audits furnish information to awarding agencies about the validity of their financial assistance award expenditures, adequacy of internal controls over Federal assistance, and the extent of compliance with grant rules and regulations. Disallowed costs identified pursuant to these audits are used to reduce future years' grant awards or returned to the awarding agency or general receipt funds, as required by appropriation law. Such reduction or returned awards are reported in the year the determination is made.

The final determination of allowable costs relating to grants provided by AHRQ in FY 2002 has not been completed. Accordingly, awards issued and expensed may ultimately be adjusted for recipients' costs determined to be disallowed pursuant to the audit. As a result, later reviews may identify disallowances of FY 2002 or 2001 expenditures after the financial statements have been issued.

Required Supplementary Stewardship Information (RSSI)

Investment in Research and Development

AHRQ oversees research and development programs intended to increase or maintain national economic productive capacity. AHRQ invested in research and development during the year ended September 30, 2002 and 2001 as follows:

	2002	2001
Applied research	$149,626	$126,600
Administrative costs		
Total	**$149,626**	**$126,600**

Appendixes

Appendix A. AHRQ's Organizational Structure

AHRQ has ten major components. They are:

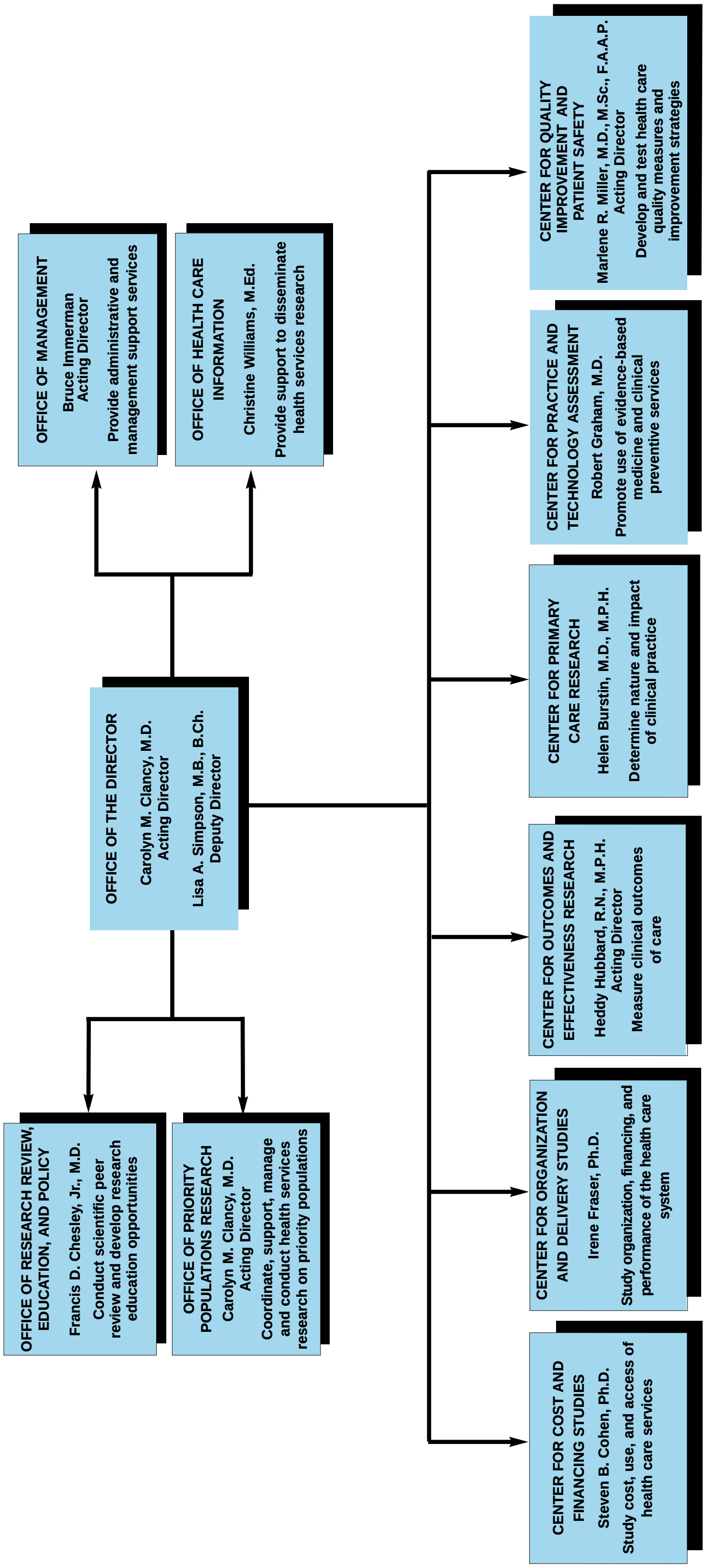
- **Center for Outcomes and Effectiveness Research.** COER conducts and supports studies of the outcomes and effectiveness of diagnostic, therapeutic, and preventive health care services and procedures. Acting Director: Heddy Hubbard, M.P.H., R.N.
- **Center for Primary Care Research.** CPCR conducts and supports studies of primary care and clinical, preventive, and public health policies and systems, including the effective application of information technology in health care. Director: Helen Burstin, M.D., M.P.H.
- **Center for Organization and Delivery Studies.** CODS conducts and manages studies of the structure, financing, organization, behavior, and performance of the health care system and providers within it. Director: Irene Fraser, Ph.D.
- **Center for Cost and Financing Studies.** CCFS conducts and supports studies of the cost and financing of health care and develops data sets to support policy and behavioral research and analyses. Director: Steven B. Cohen, Ph.D.
- **Center for Quality Improvement and Patient Safety.** CQUIPS conducts and supports research on the measurement and improvement of health care quality, including surveys regarding people's experiences with health care services and systems and research related to patient safety and medical errors. Acting Director: Marlene Miller, M.D., M.Sc.
- **Center for Practice and Technology Assessment.** CPTA directs the evidence-based practice program, consisting of: (1) the Evidence-based Practice Centers that develop evidence reports and technology assessments; (2) the Internet-based National Guideline Clearinghouse®; (3) the National Quality Measures Clearinghouse®; (4) the U.S. Preventive Services Task Force; and (5) research and evaluation on translating evidence-based findings into clinical practice. CPTA also is responsible for research on the assessment of medical technologies, including conducting and sponsoring technology assessments to assist decisionmaking in other agencies. Director: Robert Graham, M.D.
- **Office of Priority Populations Research.** OPPR coordinates, supports, manages, and conducts health services research on priority populations, including racial and ethnic minorities, women, children and adolescents, the elderly, people with special needs (disabilities, chronic illness, end-of-life issues), low-income populations, and those from inner-city and rural (including frontier) areas with health care delivery issues. Acting Director: Carolyn Clancy, M.D.

- **Office of Management.** OM directs and coordinates Agency-wide administrative activities, including human resources, financial management, grant and contract management, information resources management, and other support services. Acting Director: Bruce Immerman.
- **Office of Research Review, Education, and Policy.** ORREP directs the scientific peer review process for grants and Small Business Innovation Research (SBIR) contracts, assigns projects to Agency components, plans and manages Agency health services research training and career development programs, develops and implements Agency policies and procedures regarding extramural research programs, and evaluates the scientific contribution of proposed and ongoing research, demonstrations, and evaluations. Director: Francis D. Chesley, Jr., M.D.
- **Office of Health Care Information.** OHCI designs, develops, implements, and manages programs for disseminating the results of Agency activities, including public affairs, print and electronic publishing and dissemination, reference services, research translation and synthesis, and liaison activities with State and local health policy officials. Director: Christine G. Williams, M.Ed.

Appendix B. AHRQ's Organizational Chart, FY2002

U.S. Department of Health and Human Services

AGENCY FOR HEALTHCARE RESEARCH AND QUALITY



Appendix C. National Advisory Council for Healthcare Research and Quality

The National Advisory Council for Healthcare Research and Quality provides advice and recommendations to AHRQ's Director and to the Secretary of the Department of Health and Human Services (HHS), on activities to enhance the quality of health care, improve health care outcomes and access to care, and reduce the costs of health care services.

The 21-member council includes at least 17 private-sector experts who bring a varied perspective to the council. The private-sector members represent health care plans, clinicians, purchasers, consumers, and researchers.

Also serving as members of the council in an ex-officio capacity are the Assistant Secretary for Health, HHS, and representatives from seven Federal agencies that address health care issues: the National Institutes of Health (NIH); the Department of Defense (Health Affairs) (DoD); the Centers for Disease Control and Prevention (CDC); the Department of Veterans Affairs (VA); the Substance Abuse and Mental Health Services Administration (SAMHSA); the Food and Drug Administration (FDA); and the Centers for Medicare & Medicaid Services (formerly the Health Care Financing Administration).

The council advises the Director of AHRQ and the Secretary of HHS on:

- Priorities for health care research, especially studies related to quality, outcomes, cost, use of health care, and access to care.
- Training needs in the field of health care research and dissemination of information about health care quality.
- AHRQ's role in each of these areas in light of private-sector activity and opportunities for public-private partnerships.

Appendix D. AHRQ's Research Continuum

AHRQ's activities fall into the following three areas, which provide the steps needed to achieve the Agency's mission and goals:

1. **New research on priority health issues.** In this area, the Agency supports new research to answer important questions about what works in health care. The effort helps build the essential knowledge base to help us understand the determinants of the outcomes, quality, accessibility, and costs of care, as well as identify instances when care falls short of achieving its intended outcomes.
2. **New tools and talent for a new century.** This involves development of tools to apply the knowledge gained through the investment in new research. Here, the work of researchers is applied, and the effort begins to translate this new knowledge into instruments for measurement, databases, informatics, and other applications that can be used to assess and improve care. In addition, AHRQ provides training for the individuals who conduct this research and those who use it to build an effective and talented cadre of health services researchers and a strong research infrastructure.
3. **Translating Research into Practice.** Here is where all of the previous investment comes together. Research from the first area and the tools developed in the second area are translated into resources to close the gap between what we know and what we can do to improve health care quality. In this area, we fund research and demonstrations to translate the knowledge and tools into measurable improvements in the care Americans receive. We also develop partnerships with public- and private-sector organizations to disseminate the knowledge and tools for use throughout the health care system.

This third category is a central focus of the agency through our Translating Research Into Practice (TRIP) initiative aimed at implementing evidence-based tools and information in diverse health care settings among practitioners caring for diverse populations. The theme of translating research into practice is woven throughout all the initiatives undertaken by AHRQ in FY 2001.

In order to produce meaningful contributions to health care, AHRQ must set and monitor priorities, develop research initiatives based on those priorities, and keep a close watch on the processes and products that result from Agency-supported research. Four processes are involved in the AHRQ research cycle: needs assessment, knowledge creation, translation and dissemination, and evaluation.

- **Needs assessment.** AHRQ's activities begin and finish with the end-users of our research. Our research agenda is based on an assessment of gaps in the knowledge base and the needs of patients, clinicians, health care managers, institutions, plans, purchasers, and State and Federal policymakers for evidence-based information. Needs assessment helps us shape the research initiatives undertaken by the Agency.
- **Knowledge creation.** AHRQ continues to support and conduct research to produce the knowledge needed to improve the health care system in the coming years.
- **Translation and dissemination.** Simply producing knowledge is not enough. Findings must be presented in ways that are useful and made widely available to clinicians, patients, health care managers, and other decisionmakers. AHRQ synthesizes and translates knowledge into products and tools that help our customers solve problems and make decisions. We are proactive in our dissemination of the knowledge, products, and tools to appropriate audiences, and we form partnerships with other organizations to leverage our resources.
- **Evaluation.** To assess the ultimate outcomes of AHRQ research, we evaluate the impact and usefulness of Agency-supported work in health care settings and policymaking. This involves a variety of evaluation activities, including smaller, short-term projects that assess processes, outputs, and interim outcomes to larger, retrospective projects that assess the ultimate outcomes and impact of AHRQ activities on the health care system.

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Health and Human Services

Public Health Service
Agency for Healthcare Research and Quality
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