AHRQ Annual Report on Research and Financial Management, FY 2004

Agency for Healthcare Research and Quality

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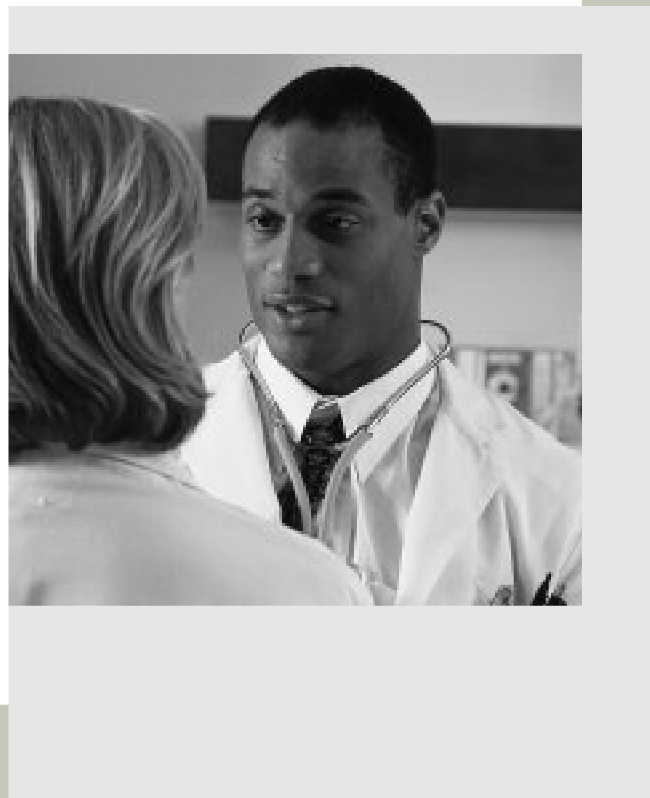

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Message from the Director

I am pleased to share the Agency for Healthcare Research and Quality's FY 2004 Annual Report on Research and Financial Management with you. This report highlights the Agency's programmatic and financial accomplishments. The Agency for Healthcare Research and Quality (AHRQ)—one of 12 agencies of the Department of Health and Human Services—has a leadership role in finding answers to difficult questions that challenge the Nation's health care system. AHRQ's focus is on getting research results into the hands of those who can put it to practical use as rapidly as possible. This report demonstrates our resolve to improve the quality and delivery of health care services provided in this Nation, as well as our continued commitment to assure sound investments in programs that will make a difference.

AHRQ's research is based on the needs of our users—patients, clinicians, health system leaders, and policymakers. The Agency's research provides the scientific foundation for the country's efforts to improve the quality, safety, effectiveness, and efficiency of health care. AHRQ supports the work of health services researchers at the Nation's leading academic centers through extramural grants and contracts, and maintains a rigorous intramural research program that collects and analyzes data to understand changes in health care quality, cost, use, and access. The Agency also supports efforts to develop the tools, knowledge, and information used by the public and private sectors to measure and improve health care quality.

AHRQ recognizes that reducing medical errors and improving patient safety is critically important for enhancing the quality of health care. Developing our nation's health information technology infrastructure is integral to delivering safe, high quality health care services. Therefore, in concert with the Department's 10-year plan to transform health care delivery through the use of health information technology, the Agency began a series of projects aimed at increasing the adoption of information technology and speeding the transformation of health care services in America. These projects will provide insight into how best to use health information technologies to improve patient safety by reducing medication errors; bridging the communication gap between primary care physicians, specialists, and patients; and reducing duplicative and unnecessary testing. The growth in information technology and the demand for the best possible evidence to guide health care decisions will result in improved delivery of health care.

Every day it becomes more apparent that AHRQ's research is making a difference, as more patients, clinicians, health system leaders, and policymakers seek evidence to inform their health care decisions. Our long-standing programs continue to inform health care decisions made at all levels of the health care system, while our newer programs are producing findings that promise to have a significant impact on the health care system.

I am also excited about our future direction, as we move to make AHRQ the “problem solving” agency for the health care system. This will require a greater focus on implementation research that is designed to develop and disseminate strategies to overcome barriers to the adoption of clinical interventions that are both effective and cost effective. We need to be more proactive in closing the gap between what we know is effective in health care and what is currently done in daily practice. We need to make the right thing to do the easy thing to do.

I take pride in our accomplishments to date, and I look forward to building on our past successes to achieve new gains for the American people. The end result of our research will be improvements in health care for Americans measured through improved quality of life and patient outcomes, lives saved, and value gained for what we spend.

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

Message from the Chief Financial Officer

The Agency for Healthcare Research and Quality's (AHRQ) FY 2004 Annual Report highlights the research and financial management activities and accomplishments of the Agency and its employees. Through this report, we describe our efforts to strengthen our financial management environment, to improve our accountability and performance, identify approaching challenges, and better protect the integrity of the resources entrusted to us.

The key to successful financial management is the implementation of the five government-wide goals identified in the President's Management Agenda (PMA): strategic management of human capital, competitive sourcing, improved financial performance, expanded electronic government, and budget and performance integration. In FY 2004, AHRQ made significant progress toward implementing each of these initiatives. We aggressively supported and participated in the development of the Department's Unified Financial System, which will consolidate HHS' financial management structure by replacing five existing accounting systems, thus providing a more timely and coordinated view of critical financial management information. With respect to improving budget and performance integration, we continued to realign the work we do with our strategic goals and those of the Department, and to automate management processes across a wide spectrum of administrative activities within the Agency.

AHRQ management believes that financial accountability is the cornerstone of the "improved financial performance" initiative of the PMA. In FY 2004, AHRQ developed a risk assessment plan that looked at whether Agency grant, contract, and simplified acquisition activities are susceptible to improper payments and made substantial progress in instilling a culture of accountability toward the reduction of improper payments. In the coming year, our focus will be on enhancing our internal controls and financial management techniques to ensure a strong risk-management program. AHRQ also fully participated in the Department's "top-down" audit and contributed to HHS meeting the accelerated reporting requirements and earning a "clean" opinion on its financial statements.

In accordance with OMB's Program Assessment Rating Tool (PART) for the formal evaluation of Federal programs, we conducted a review of the Agency's pharmaceuticals outcome program. This review will facilitate the linking of high quality outcomes with associated program costs. Over the next few years, the Agency will concentrate on totally integrating the financial management of these programs with their performance.

As CFO, I remain committed to building on our financial management and program performance accomplishments to date. While we are pleased with the improvements made and successes realized during the past year, we know that we can achieve even more through investing in innovations that promote sound stewardship of our resources and effective leveraging of technology. Finally, we will continue to do our utmost to achieve more under the programs we manage, as well as emphasize the importance of a robust internal control program to meet our programmatic and fiscal responsibilities.

Kathie Kendrick
Chief Financial Officer
Agency for Healthcare Research and Quality

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Part 1.
AHRQ Activities and Accomplishments, FY 2004

Chapter 1. Health Care in America

Health care in the United States continues to be the finest available anywhere in the world. Advancements in treatment for heart disease, diabetes, and cancer help people live longer, and with better quality of life. Americans are looking forward to an electronically linked health care system that can deliver more coordinated and higher quality care. Although there have been many advances, the U.S. health care system continues to face many challenges. For example:

- According to the most recent data from the Medical Expenditure Panel Survey (MEPS), health care costs continue to escalate. Total expenditures for health care services in 2002 were $810 billion compared with $726 billion in 2001 – an increase of 11.6 percent.
- Health insurance premiums are also increasing. In 2002, the average annual total premium for single coverage was $3,189, a 10.4 percent increase over 2001. Family coverage averaged $8,469 in 2002, a 12.8 percent increase over 2001.
- During the first half of 2003, over 47 million people (18.8 percent of the U.S. population) under age 65 were uninsured.
- Expenditures for prescribed medicines reported as purchased by the elderly in the U.S. community population totaled $49.9 billion in 2002, an increase of 12.6 percent from the $44.3 billion total reported in 2001.
- In 2002, the top three prescribed medicines for the elderly in terms of expenditures were all cholesterol-lowering medicines. Lipitor® ranked first at $2.47 billion, Zocor® ranked second at $2.28 billion, and Pravachol® ranked third at $1.13 billion. Expenditures for just these three medicines totaled $5.9 billion in 2002, and represented 11.8 percent of total prescription medicine expenditures by the elderly that year.
- The percentage of the community adult population who reported having high cholesterol and having purchased a prescribed medicine to treat high cholesterol more than doubled from 1987 to 2001 (39.1 percent to 89.7 percent).
- In 2001, about 12.4 million Americans age 18 and older and not living in institutions had been told by a physician that they had diabetes. When comparing 1987 to 2001, the percentage of adults who reported having diabetes and purchasing a prescribed medicine to treat diabetes increased as well (83.3 percent to 92.9 percent).
- Roughly 60 million or one-third of the adults in the United States are obese, and 9 million adults are extremely obese. Obesity increases the risk of developing heart disease, diabetes, some cancers, osteoarthritis, and other disorders.
- Access to care continues to be a problem for many Americans. Less than half of America's small businesses (those with fewer than 50 employees) offer their employees health benefits.

- An estimated 90 million adults in America have lower-than-average reading skills. They are less likely than other Americans to get potentially life-saving screening tests such as mammograms and Pap smears, or to receive flu and pneumonia vaccines.

AHRQ: Advancing Excellence in Health Care

As one of 12 agencies within the Department of Health and Human Services, the Agency for Healthcare Research and Quality (AHRQ) supports health services research initiatives that seek to improve the quality of health care in America. The Agency works to make sure that research findings make their way into practice and policy by designing, disseminating, and implementing tools and products. Consistent with the vision that led to the Agency's creation 15 years ago, AHRQ continues to focus on both supporting research and ensuring that findings and evidence are used to improve health care services and outcomes for all Americans. Thus, making sure that findings from AHRQ supported research are tranlated into everyday clinical practice. This step is a critical component of AHRQ's mission.

Role and Mission of AHRQ

AHRQ's mission is to improve the quality, safety, effectiveness, and cost-effectiveness of health care for all Americans. The Agency works to fulfill this mission by conducting and supporting health services research, both within AHRQ as well as in leading academic institutions, hospitals, physicians' offices, health care systems, and many other settings across the country.

The Agency has a broad research portfolio that touches on nearly every aspect of health care. AHRQ-supported researchers are working to answer questions about:

- Clinical practice.
- Outcomes of care and effectiveness.
- Evidence-based medicine.
- Primary care and care for priority populations.
- Health care quality.
- Patient safety/medical errors.
- Organization and delivery of care and use of health care resources.
- Health care costs and financing.
- Bioterrorism and public health preparedness.
- Health information technology.

The ultimate goal is research translation–that is, making sure that findings from AHRQ research are widely disseminated and ready to be used in everyday health care decisionmaking. AHRQ research findings are used by providers, patients, policymakers, payers, health care administrators, and others to improve health care quality, accessibility, and outcomes of care.

AHRQ's Customers

AHRQ provides assistance, often Web-based, for its customers who want to improve the quality of patient care. For example, AHRQ sponsors a Web-based clearinghouse (QualityTools.gov) that provides practical tools for assessing, measuring, promoting, and improving the quality of Americans' health care. The site's purpose is to provide clinicians, policymakers, purchasers, patients, and consumers an accessible mechanism to implement quality improvement recommendations and easily educate individuals regarding their own health care needs.

Clinicians and Other Health Care Providers

Clinicians who provide direct care and services to patients use AHRQ's evidence-based research to deliver high-quality health care and to work with their patients as partners. The evidence developed through AHRQ-sponsored research and analysis helps everyone involved in patient care make informed choices about what treatments work, for whom, when, and at what cost. AHRQ also provides clinicians with clinical decision-support tools and access to guidelines and quality measures.

- AHRQ partnered with Premier, Inc., the Department of Defense, and the American Hospital Association to develop a new tool to help hospitals and health systems evaluate employee attitudes about patient safety in their facilities or within specific units. The Hospital Survey on Patient Safety Culture addresses a critical aspect of patient safety improvement: measuring organizational conditions that can lead to adverse events and patient harm.
- Researchers at the University of North Carolina at Charlotte developed a critical pathway for clinicians to use when treating victims of intimate partner violence (IPV). Several guidelines for the screening and management of IPV have been published. The pathway helps to integrate care guidelines by providing a visual summary of care processes, their timing, and the roles of each provider.
- AHRQ released two interactive applications for Palm Pilots and other personal digital assistants (PDAs) that clinicians can download from the Agency's Web site:
  - the Pneumonia Severity Index Calculator, an interactive application to help doctors quickly and easily determine whether patients with community-acquired pneumonia should be treated at home or in a hospital. Developed by MDpda Design, Inc., the Pneumonia Severity Index Calculator is based on a clinical algorithm produced in 1997 by an AHRQ-funded research team.
  - the Interactive Preventive Services Selector, a clinical decision-support tool, is designed to help clinicians deliver evidence-based medicine when they are with a patient. It helps clinicians quickly and easily search for which preventive services to provide—or not provide—to patients based on their age and sex
- AHRQ's National Guidelines Clearinghouse™ (NGC) is a comprehensive database of evidence-based clinical practice guidelines and related documents. The NGC

provides clinicians, health plans, integrated delivery systems, purchasers, and others with a Web-based mechanism for obtaining objective, detailed information on clinical practice guidelines.

Web M&M: online patient safety journal

AHRQ encourages ongoing learning from experts in the field to expedite quality improvement. To help health care professionals benefit from insights beyond their home institutions, AHRQ continues to sponsor Web M&M, a monthly, online medical journal that showcases patient safety lessons drawn from actual cases. This unique online resource allows health care professionals to learn about avoidable errors made in other institutions, as well as effective strategies for preventing their recurrence. One case each month is expanded into a "Spotlight Case" that includes a downloadable set of slides and an interactive learning module that features readers' polls, quizzes, and other multimedia elements. Physicians may obtain continuing medical education credit and nurses are able to obtain continuing education credit by successfully completing the spotlight case and its questions. Trainees can receive certification credits in patient safety, thereby helping to meet new Accreditation Council on Graduate Medical Education requirements for systems-based learning. There are now 5,500 registrants viewing the journal regularly. Here are some examples of cases shared on Web M&M in 2004:

- A patient given an antipsychotic drug intravenously who then required a pacemaker.
- A patient who had heart surgery and had a suction tip inadvertently left inside his chest.
- A triage delay, which led parents to take their feverish child to a different emergency department—where, upon arrival, the child was in full arrest.
- A pregnant woman who arrived at the emergency department with severe abdominal pain, whose correct diagnosis was not considered until the OB resident arrived.
- A nurse who drew the privacy drapes for a child in the recovery room, not realizing the child was in distress until she nearly stopped breathing.
- A woman who died after 3 weeks of hospitalization for an undiagnosed respiratory infection, whose test results later revealed that she actually had tuberculosis.
- A patient who nearly had surgery intended for another patient with the same, unusual last name.
- A patient with vertigo who was handed off to multiple providers, and her true—and ultimately lethal—diagnosis was missed.
- A man sent for a Holter monitor to record heart rhythm who received a skin test instead.

continued

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- Signout flaws that caused a non-diabetic hospitalized woman to be given several rounds of insulin and concentrated dextrose after repeated blood tests showed her glucose to be dangerously high, then dangerously low.
- A parent who misunderstood the instructions on how to administer a medication, ultimately leading to an infant choking on a syringe cap.
- A man discharged from the emergency department who was found unresponsive at home the next morning and an autopsy revealed a diagnosis not even considered.
- A central line mistakenly placed in the carotid artery, causing permanent neurologic damage.

Public Policymakers, Purchasers, and Other Health Officials

Policymakers, purchasers, and other health officials use AHRQ research to make well-informed decisions on health care services, insurance, costs, access, and quality. Public policymakers use the information produced by AHRQ to expand their capability to monitor and evaluate changes in the health care system and to devise policies designed to improve its performance. Purchasers use the products of AHRQ-sponsored research to obtain high-quality health care services. Health plan and delivery system administrators use the findings and tools developed through AHRQ-sponsored research to make choices on how to improve the health care system's ability to provide access to and deliver high-quality, high-value care.

- AHRQ sponsors free, interactive Web conferences and workshops that help facilitate understanding of the evidence base for quality-based purchasing and public reporting, encourage the use of tools to assist with evaluations of health care quality, and help policymakers, purchasers, and other health officials make well-informed decisions. These Web conferences and workshops are detailed in the User Liaison section in Chapter 4 of this report.
- AHRQ has several major initiatives that help policymakers and others stay informed on health care services, insurance, costs, access, and quality. The Medical Expenditure Panel Survey (MEPS) is a vital resource designed to continually provide policymakers, health care administrators, businesses, and others with timely, comprehensive information about health care use and costs in the United States. The Healthcare Cost and Utilization Project (HCUP) is a family of health care databases and software tools to enhance the use of administrative data developed through a Federal-State-Industry partnership and sponsored by AHRQ. Data from HCUP have been used to produce reports that answer questions on reasons why Americans are hospitalized, length of stay, charges, and outcomes. The HIV Cost and Services Utilization Study (HCSUS) was the first major research effort to collect information on a nationally representative sample of people in

care for HIV infection. It continues to provide policymakers with reliable information about the type and costs of the health care services that people with HIV disease are receiving so that informed resource-allocation decisions can be made. MEPS, HCUP, and HCSUS are discussed in more detail in Chapter 6 of this report.

Consumers and Patients

Findings from AHRQ research can help consumers and patients make informed choices about treatments, providers, hospitals and long-term care facilities, and health plans. The goal is to educate and empower patients to play an active role in their own health care and to work in partnership with their clinicians to achieve the best outcomes possible. AHRQ produces personal health guides to help people keep track of preventive health care (such as immunizations and screening tests), brochures presenting the latest findings on a variety of health conditions, checklists to help patients identify good quality care and decrease the likelihood of a medical error, and tools to help patients make wise health care choices.

- Improving the patient experience of care is a widely recognized component of overall quality. Results from the CAHPS® surveys include reporting tools that provide reliable information to help consumers and purchasers assess and choose among health plans, providers, and other health facilities. The first CAHPS® surveys, which assessed consumers' perceptions of the quality of health plans, are used by more than 100 million Americans, including those in Medicare managed care plans, enrollees in the Federal Employees Health Benefits Program, and participants in health programs of the Department of Defense.
- AHRQ published a booklet for older adults called *The Pocket Guide to Staying Healthy at 50+*, an update to the original published in 2000. This guide, which incorporates new research-based recommendations from the U.S. Preventive Services Task Force, was developed in partnership with AARP. The *Pocket Guide*, available in English and Spanish, includes tips and recommendations on good health habits, screening tests, and immunizations. It provides easy-to-use charts to help track personal health information and includes questions to ask health care providers, as well as resources for additional information.
- AHRQ released a new consumer tool for Palm™ and Pocket PCs to help smokers who want to quit. *Quit Smoking: Consumer Interactive Tool* is drawn from the evidence-based recommendations of the Public Health Service guideline, *Treating Tobacco Use and Dependence*. It helps smokers set up a program tailored to their individual needs. To use the application, the smoker plugs in the date he or she wants to quit, and the program counts back 5 days leading up to the quit date. It then offers a 5-day countdown of daily practical steps to help the smoker quit, such as identifying reasons to quit smoking; talking to the doctor about medications, including the nicotine patch or gum; and getting support from family and friends. The AHRQ Palm™ and Pocket PC applications are free and can be downloaded from the Agency's Web site.

Chapter 2. AHRQ's Research Portfolio

AHRQ research priorities are user-driven, and the Agency actively responds to the needs of its customers. The Agency receives input and feedback through the National Advisory Council, meetings with stakeholder groups, *Federal Register* notices, and comments submitted by the public through AHRQ's Web site at 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. Knowing that these interventions work is only a first step. We also need to know if they are effective in everyday practice and 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 appropriately and efficiently to improve patients' health.

Opportunities for Research

Almost 80 percent of AHRQ's funding supports research that is conducted at universities, in clinical settings such as hospitals and doctor's offices, and in health care organizations. AHRQ makes funding awards through targeted program announcements on particular research projects or to researchers with innovative ideas that propose to help improve health care in America. In FY 2004, we implemented a new policy of inclusion of priority populations in the research we fund. Priority populations include low-income groups, minority groups, women, children, the elderly, and individuals with special health care needs, including individuals with disabilities, and individuals who need chronic care or end-of-life health care. New in 2004, prospective grantees are required to discuss plans to include priority populations within the context of their scientific objectives and research methods. The goal of this policy is to ensure that the Agency's overall research portfolio includes priority populations.

Innovative Research: Addressing Current and Emerging Challenges

The topics addressed by innovative research proposals reflect timely issues and ideas from top health services researchers. AHRQ uses Program Announcements (PAs) to invite applications and communicate the Agency's priorities for new and ongoing research topics. Examples of new and ongoing FY 2004 PAs include:

- AHRQ Health Services Research Grants. This program provides support for projects focused on improvements in health outcomes, and enhanced decisionmaking at all levels of the health care system. Findings from these projects will increase our understanding of what works, for whom, when, and at what cost. Research funded by this PA will strengthen quality measurement and improvement, and identify strategies to improve access, foster appropriate use, and reduce unnecessary expenditures.
- Practice-based Research Networks (PBRNs) and the Translation of Research into Practice. Projects funded under this program are evaluating scientifically based strategies for translating evidence into sustainable improvements in clinical practice and developing, improving, and/or validating research dissemination methods applicable to cancer control in primary care practice. Researchers will assess the conditions under which the strategies being tested can be expected to be sustainable, can be rapidly transferred or adapted to other primary care settings, and can lead to demonstrable improvements in the quality of care and/or patient outcomes.
- Building the Evidence to Promote Bioterrorism and Other Public Health Emergency Preparedness in Health Care Systems. These grants are examining and promoting the health care system's readiness for a bioterrorist event and other public health emergencies through the development of new evidence, tools, and models. Specific focus is being given to emergency preparedness of hospitals and health care systems for bioterrorism and other public health emergencies, enhanced capacity needs of ambulatory care, home and long-term care, care of psychosocial consequences, and other related services. Researchers are also assessing information technology linkages and emerging communication networks to improve communication in the health care system, emergency response networks, and public health agencies. They are also exploring novel uses of health care system training strategies that can prepare community clinicians to recognize and manage bioterrorist events and other public health emergencies.
- Translating Research into Practice (TRIP). This is a collaborative effort between AHRQ and the Health Services Research and Development Service within the Department of Veterans Affairs. Researchers are implementing 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 cost, use, and access. Two specific priorities for these projects are to (1) compare the use of interventions to translate research into practice across different health care systems, and (2) measure the impact of translation activities and interventions that foster measurable and sustainable quality and patient safety improvement or consistent quality and patient safety at a lower cost.

In FY 2004, AHRQ joined with other sponsors to fund and support the following projects:

- Understanding and Promoting Health Literacy. The goal of these projects is to increase scientific understanding of the nature of health literacy and its relationship to healthy behaviors, illness prevention and treatment, chronic disease management, health disparities, risk assessment of environmental factors, and health outcomes, including mental and oral health. Researchers are focusing on interventions that can strengthen health literacy and improve communication between health care and public health professionals (including dentists, health care delivery organizations, and public health entities) and consumers and patients.
- Research Partnerships for Improving Functional Outcomes. These projects are focused on biological, behavioral, medical, and/or psychosocial problems related to the rehabilitation or health maintenance of individuals with acute or chronic disease. Researchers are developing and testing the efficacy of symptom-focused or holistic/integrated therapies for high-prevalence conditions causing disability, such as low back pain, stroke, hearing loss, vision loss, and congestive heart failure and for lower prevalence conditions with high levels of comorbidity, such as spinal cord injury and spina bifida.
- Colorectal Cancer Screening in Primary Care Practice. The purpose of these grants is to develop innovative research projects to increase the knowledge base for enhanced translation of effective colorectal cancer screening techniques into community practice. Researchers are developing interventions, mechanisms, and systems to monitor and improve compliance with recommendations for colorectal cancer screening and followup, including tracking procedures such as sigmoidoscopy or colonoscopy. Other projects are evaluating how the risk for colorectal cancer is assessed in the primary care setting and proposing strategies to improve informed and shared decisionmaking between physicians and patients regarding colorectal cancer screening options.
- Studies of the Economics of Cancer Prevention, Screening, and Care. The purpose of these grants is to increase our knowledge about the economic aspects of cancer prevention screening, and care, including the economic burden to the patient, family, and society resulting from cancer and cancer treatment. The overall goal of this initiative is to enhance the state-of-the-science on the quality of cancer care and inform Federal decisionmaking on care delivery, coverage, and regulation to help formulate effective health care policy related to cancer prevention and control.

- Cancer Surveillance Using Health Claims-Based Data Systems. Investigators are assessing patterns of care, quality and outcomes of care, and health disparities across the continuum of treatment. Researchers are also looking at the intensity and types of services provided at the end of life, short-term complications following cancer treatment, and long-term complications for cancer survivors that result from their cancer treatment.
- Screening and Intervention for Youth in Primary Care Settings. This research project is focused on expanding the role of primary care in the prevention and treatment of drug abuse and related health problems among youth in the pre-dependency phase of drug use. Researchers are developing, testing, and refining screening/assessment instruments to be embedded into comprehensive behavioral health assessments for use in primary care settings to screen for and assess drug use. The emphasis is on tools that are simple, brief, easy-to-use, have optimum levels of sensitivity and specificity, and can be administered by a variety of health care providers. These projects are also evaluating the effect that drug abuse screening tools have on primary care providers' ability to recognize patient problems and intervene accordingly.
- Translational Research for the Prevention and Control of Diabetes. The goals of these projects are to translate recent advances in the prevention and treatment of type 1 or type 2 diabetes into clinical practice for individuals and communities at risk. Researchers are developing and testing improved methods of health care delivery to patients with or at risk of diabetes, improved methods of diabetes self-management especially among underserved and minority populations, and cost-effective, community-based strategies to promote healthy lifestyles that will reduce the risk of diabetes and obesity.

The following summaries are representative of new projects funded in FY 2004 that are focused on well-defined research areas or topics.

- Improving Diabetes Efforts Across Language and Literacy (IDEALL). The goal of this project is to expand exposure to self-management support strategies for patients and providers within the Community Health Network of San Francisco. Researchers will examine the extent of patient participation, engagement with the interventions, changes in diabetes indices, and relative resource use.
- Expanding Surge Capacity Through Use of Former (Shuttered or Converted) Hospitals. This project is assessing the required planning/preparedness needed for hospital use in the Boston area during a major man-made or natural disaster. The researchers will evaluate ways to augment hospital bed capacity, assure sufficient numbers of trained medical personnel and pharmaceutical supplies, expand national disaster medical systems capabilities, and test models to set surge requirements.

- Health Care System Preparedness and Surge Capacity for Bioterrorism and Public Health Emergencies. The goal of this project is to produce a planning guide for hospital and health system administrators to help them understand and operationalize regional preparedness plans for emergencies that result in large numbers of casualties.
- Hospital Adoption of the National Quality Forum Safe Practices. For this project, researchers will examine 30 health care safe practices in actual clinical environments and assess challenges to their implementation, costs and benefits, types of support and resources and tools necessary for successful implementation, and any association and/or correlation between the implementation of safe practices and improved clinical outcomes.
- Root Cause Analyses of Precursor Events Using an Electronic Reporting System. Researchers are testing existing assumptions that the underlying causes and contributing factors for three types of medical errors are the same, similar, or have no relationship by examining their root causes. They will further test whether this similarity is associated with the severity of potential or actual patient safety events and whether such associations vary by clinical focus.
- Translating Data to Information: Development of Reporting Template for the AHRQ Quality Indicators (QIs). This project provides support for development and testing of reporting templates for all QIs, Prevention QIs, Inpatient QIs, and the Patient Safety Indicators for consumers, purchasers, policymakers, and health care providers. Researchers also will evaluate an existing program that has used the AHRQ QIs for public reporting and pay for performance. Findings from this project will be incorporated into the QI software thus providing QI users with ready access to recommended reporting templates.
- Development of Curricula to Train Users in the Application of the Quality Indicators (QI) and the Interpretation of QI Output. This project will develop training curricula for use of AHRQ's QIs. These modules and related documentation are intended for use by stakeholder audiences including Federal and State agencies, hospital associations, health care systems, purchasers, and payers interested in applying these standardized, scientifically based quality indicators to their data.

Selected Examples of Recent Findings from AHRQ-Funded Research

- More widespread use of beta-blockers to treat patients with heart failure would result in lower costs to Medicare. A decision model developed by the Duke Center for Education and Research on Therapeutics estimated the costs to Medicare of treating heart failure per-person over a 5-year period were:
  - without beta-blocker $39,739.
  - with beta-blocker $33,675 a savings of $6,000 per patient.
- Concurrent use of erythromycin with antifungal agents, certain calcium-channel blockers, and some antidepressant drugs (which inhibit CYP3A – a substance that helps the body metabolize erythromycin) should be avoided. AHRQ-funded researchers found that patients who took erythromycin with drugs that strongly inhibit the action of CYP3A had a substantially elevated risk of sudden death from cardiac causes.
- About two-thirds of chronically ill adults never tell their doctors that they don't take their medications because of high costs. Study results indicate that patients were most likely to find their clinicians helpful if the clinicians provided free samples, asked about problems paying for prescriptions, and offered advice about how to pay for current regimens.
- Nearly half of pregnant women who receive medications other than vitamins may be taking drugs that the Food and Drug Administration classifies as having no human evidence of safety for use during pregnancy or that evidence has shown can harm a developing fetus. A study conducted by researchers at AHRQ's HMO Research Network CERT found that 64 percent of women were dispensed a medication other than a vitamin or mineral supplement within the 270 days prior to delivery. Of those, nearly 40 percent of women were dispensed a drug for which human safety has not been established (Category C on the FDA's list). Nearly 5 percent were dispensed drugs from Category D, which the FDA classifies as having positive evidence of fetal risk but also having benefits of use that may be acceptable despite the risk. An additional 5 percent of women were dispensed a drug from Category X, for which the evidence indicates definite fetal risks based on human or animal studies or based on human experience, and the risk of using the drugs clearly outweighs any possible benefit.

Building the Research Infrastructure

AHRQ believes that future improvements in health care depend in large part on the investments we make today in the research infrastructure. Health services researchers focus on some of the most complex and challenging issues currently affecting health care in the United States, and training new investigators is fundamental to producing the next generation of health services researchers. AHRQ supports an array of intramural and extramural predoctoral and postdoctoral educational, research infrastructure, and career development grants and opportunities in health services research. In addition, the Agency supports the development of health services research infrastructure in emerging centers of excellence and works with Federal and academic partners to develop innovative curricula and educational models. The following is a list of training programs and support mechanisms for new health services research investigators:

Health Services Research Dissertation Awards

AHRQ supports research undertaken as part of an academic program to qualify for a doctorate. The AHRQ dissertation award supports dissertation research costs of students in accredited research doctoral programs in the United States (including Puerto Rico and other U.S. Territories or possessions). The dissertation will focus on areas relevant to health services research, with emphasis placed on methodological and research topics that address the mission of AHRQ.

Independent Scientist Awards

AHRQ sponsors Independent Scientist Awards in health services research, which are "Research Career Awards" intended to foster the development of promising new investigators in the field. Individual awards support newly independent scientists who can demonstrate a need for a period of intensive research focus.

Mentored Clinical Scientist Development Awards (K08)

AHRQ sponsors the Mentored Clinical Scientist Development Award in health services research. Support is provided for the development of outstanding clinician research scientists who are committed to a career in health services research, with a focus on development as an independent scientist.

National Research Service Award (NRSA) Program

The NRSA program, which supports the training of over 150 investigators annually, provides institutional training grants to academic institutions to develop health services research training opportunities across the Nation. The purpose of the NRSA program is to help ensure that adequate numbers of highly trained individuals are available to carry out the Nation's health services research agenda in order to improve quality of health care, assure value for health dollars spent, and enhance access to services. One goal is to equip students with the necessary knowledge, skills, and experiences to conduct future research which will meet the needs of patients, providers, health care plans, purchasers, and/or policymakers. NRSA institutional training grants assist these programmatically diverse domestic institutions in supporting predoctoral and postdoctoral academic training by providing support for student stipends and tuition.

Predoctoral Fellowship Awards For Minority Students

AHRQ sponsors predoctoral fellowship awards for minority students. Designed to enhance racial and ethnic diversity in the health services research sciences, this fellowship provides up to 5 years of support for research training leading to the Ph.D. or equivalent research degree; the combined M.D./Ph.D. degree; or other combined professional and research doctoral degrees. Support is not available for individuals enrolled in a medical or other professional school program unless it is a combined professional doctorate/Ph.D. degree program.

Building Research Infrastructure and Capacity (BRIC) Program

The Building Research Infrastructure and Capacity (BRIC) program is a merit-based, peer-reviewed program in response to Congressional intent to broaden geographic distribution of health services research funding among institutions located in States where the success rate for applications to the AHRQ has historically been low. BRIC-eligible States included all states that have received less than $3 million dollars in AHRQ support over the 5-year time span of 1999-2003. AHRQ originally funded six Phase I BRIC awards in FY 2001. Ten States received over $1.7 million in 2-year planning grants: Kentucky, Louisiana, Mississippi, New Jersey, Utah, and a consortium involving Idaho, Montana, Nevada, Utah and Wyoming. Support for Phase 1 of the projects ended in FY 2002. The second phase of the BRIC program was limited to the original recipients of the initial BRIC planning grants. Phase II provided additional support for the refinement, expansion, and implementation of plans developed among grantees supported in Phase I, including resources to conduct pilot research projects.

Minority Research Infrastructure Support Program (M-RISP)

The M-RISP is designed to broaden the capacity of academic institutions predominantly or substantially serving minority racial and ethnic minority populations and the faculty at these institutions to conduct health services research. These awards provide grant support to strengthen the research environments of minority institutions and their ability to conduct research in health services that has the capacity to be disseminated, implemented, and translated into practice and policy.

The M-RISP provides support for two types of primary activities: (1) Institutional research development support to strengthen the institutional infrastructure and enhance the capability of individual faculty members to undertake health services research; and (2) Individual investigator-initiated research project support for developing research scientists to conduct small grant research activities that can lead to successful applications for funding under regular health services research grant mechanisms.

Ongoing Research

Examples of research grants funded in FY2004 under these training programs and support mechanisms include the following:

A **Qualitative Description of Enrollment in PACE.** The Program of All-Inclusive Care for the Elderly (PACE), a comprehensive community based long-term care programs, provides cost effective comprehensive care for elders with the goal of promoting independence and minimizing institutionalization. The purpose of this qualitative study is to describe enrollment in a PACE from the perspective of elders, families, informal caregivers, and providers, with specific focus on the following questions: What is enrollment in a PACE? When, how, and why do elders enroll in PACE? What events contribute or lead to enrollment in PACE from the perspectives of elders, families, informal caregivers, and providers of health and social services?

Using an EMR to Improve Urban Child Health. Researchers are using an electronic medical record (EMR) in a network of urban primary care centers to: (1) describe the content and quality of EMR-based urban child and adolescent primary care; (2) evaluate the efficacy of evidence-enhanced audit and feedback to improve the delivery of multiple primary care services; (3) describe the perceptions of primary care clinicians and quality improvement strategies used after they receive practice-based audit and feedback; (4) evaluate incremental improvements in quality following the addition of point-of-care decision support to improve the delivery of multiple primary care services; and (5) describe the perceptions of primary care clinicians following receipt of point-of-care decision support.

Capacity Building in Organizational Research. Researchers are investigating organizational/management science and its measurement and applying these results to the submission of a systems-directed intervention that seeks to improve patient safety and decrease medical errors. The practice-based research and organizational assessment products developed in this project will produce information that: (1) is relevant and useful to health care policymakers, payers, providers, and consumers; (2) can be applied in other health care organizational settings; and (3) will help address AHRQ's response to challenges of organizational research.

Chapter 3. From Research to Results

Partnerships and Coordination

Forming partnerships allows organizations in both the public and private sectors to strengthen their capabilities in improving health care, stimulate new forms of integration among organizations, and contribute to ensuring better access to health services and better health outcomes.

AHRQ has a long and successful history of developing partnerships and working in collaboration with various organizations within the Department of Health and Human Services, other components of the Federal Government, State and local governments, and private-sector entities. Working in partnership with other organizations helps us meet our goals.

Most of the Agency's partnerships are related to the development of new research knowledge, tools, measures, and decision support mechanisms so that existing knowledge can easily be used. AHRQ works with various agencies and organizations in 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 that place great emphasis on partnerships and collaboration. In 1999, AHRQ developed the first initiative—Translating Research into Practice (TRIP)—a targeted research effort designed to assess the effectiveness of different strategies and methods for applying the often technical findings from research in daily clinical practice. This was followed by the establishment of two "real world" research networks—the Integrated Delivery System Research Network (IDSRN) and the Practice-Based Research Network (PBRN)—that serve as ongoing, living laboratories, enabling us to quickly assess emerging trends in health care and evaluate the impact of new interventions.

The following examples illustrate the many ways in which AHRQ works in collaboration and partnership to carry out the Agency's mission.

- We are developing new knowledge regarding effective health care services and efficient approaches to financing and delivering services by co-funding research projects with other public- and private-sector funding organizations and sponsoring joint research solicitations with other HHS agencies and research foundations. When we co-fund a project supported by other agencies, our goal is to ensure that the research addresses issues that are significant and important in daily practice, such as the comparative cost-effectiveness of alternative treatments, which would otherwise go unaddressed.
- Collaborations are underway to synthesize existing scientific knowledge and develope tools, measures, and other decision-support mechanisms to assist

physicians, patients, and others in using the evidence on what works best. A growing number of Federal agencies—(such as the National Institutes of Health [NIH], the Centers for Medicare & Medicaid Services [CMS], 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. In addition, CMS uses technology assessments prepared by the EPCs to inform decisions about Medicare coverage of new and existing health technologies. For example, a number of professional societies, providers, and other private-sector entities used the AHRQ evidence report, *Making Health Care Safer: A Critical Analysis of Patient Safety Practices* to develop evidence-based clinical care practices and related health policies.

- Creating partnerships to accelerate the pace with which research findings can be translated into improved quality of care and health system performance:
  - AHRQ established the AHRQ-VA Patient Safety Improvement Corps, a training program for State health officials and their selected hospital partners. During the first annual program, 50 participants completed coursework in three, 1-week sessions at AHRQ's offices in Rockville, MD. Participants analyzed adverse medical events and close calls—sometimes known as "near misses"—to identify the root causes of these events and correct and prevent them. Anticipating that the growing demand for patient safety expertise will exceed the capacity of this intensive program, one aspect of this initiative will be to develop Web-based training modules. These will be in the public domain and could be used independently or by private-sector training programs that would provide additional "hands on" experiences.
  - To accelerate the pace of quality improvement, AHRQ launched a program called Partnerships for Quality. The Partnerships for Quality program provides a mechanism for collaborations aimed at translating research findings on quality improvement into practice and policy. The unifying goal of this program is a strong commitment to the improvement of health care services and their security, safety, outcomes, quality, effectiveness, and cost-effectiveness. The projects are developing partnerships among researchers, health plans, medical and nursing facilities and services, employers, consumer groups, and professional societies. The aim is to test prototype activities aimed at accelerating the health system's adoption of research findings that have been shown to improve quality of care for patients. For example, AHRQ awarded a grant to The Leapfrog Group, which is a consortium of more than 135 large private and public health care purchasers buying health benefits for more than 33 million Americans. Leapfrog has devised a plan for conducting and rigorously evaluating financial incentive or reward-based pilot projects in up to six U.S. health care markets in two waves over the next 3 years.
  - The Surgical Care Improvement Project (SCIP) is a national partnership of organizations committed to improving the safety of surgical care through the

reduction of postoperative complications. In summer 2005, the SCIP partnership will launch a multi-year national campaign to substantially reduce surgical mortality and morbidity in four target areas through collaborative efforts. The goal is to reduce nationally the incidence of surgical complications by 25 percent by the year 2010. The project is led by CMS and the Center for Disease Contorl and Prevention (CDC). AHRQ is a member of the SCIP Partnership's steering committee.

Translating Research into Practice

Over 10 years may pass before the findings of original research become part of routine clinical practice, and often the findings are never implemented. Numerous evidence-based clinical practice guidelines recommend specific approaches to clinical care, but we do not know how many doctors and other clinicians follow these guidelines. We do know that passive guideline dissemination has rarely been effective in changing clinician behavior. Methods that have been shown to be effective in specific settings include use of peer-opinion leaders, clinical practice audit and feedback, educational interventions, small group consensus processes, more intensive academic detailing, prospective reminder systems, and computer-based guideline implementation.

AHRQ funded the first 14 projects of its TRIP initiative in 1999 to help close the gap between knowledge and practice to ensure continuing improvements in the quality of the Nation's health care. There are now 458 sites (hospitals, physician's offices, nursing homes, Head Start programs, outpatient clinics, and research network practices) involved in this initiative. AHRQ funded a second set of 13 projects (known as TRIP II) in 2000 to evaluate different strategies for translating research findings into clinical practice. The goal of TRIP II is to identify strategies that can be validated and replicated 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.

A recent survey of principal investigators for the TRIP II projects revealed several barriers to implementing TRIP projects as well as some successful solutions. The survey was conducted 6 months and 18 months after project implementation. In the early months of TRIP implementation, challenges occurred often with the human subjects' application process and with introducing new TRIP responsibilities at the study sites. A year later, the most prevalent barriers were process (such as blocked access to data), behavioral (target audience not participating), and structural (skill or system limitations at the study site).

For example, implementation of an intervention to improve asthma management met with resistance from agency staff. The research team found that the staff appeared not to trust the intervention and were sometimes overwhelmed by the tasks required for asthma management. To address the problems, the researchers made several minor adjustments to the intervention and provided the staff with necessary

training. Early evidence of the positive impact of the intervention on families was used to win staff acceptance. An incentive program, including small monetary rewards and social recognition, was implemented for "asthma champions."

Integrated Delivery System Research Network

Most health care in the United States is delivered through complex health systems such as managed care organizations, hospitals and hospital networks, large physician groups, and nursing homes. As a result, these organizations have become increasingly important as both creators and users of information. Many of these organizations have considerable research capacity, including sophisticated data systems that follow patients over time and across different health systems; ties between research and operations staff; and strong teams of researchers. However, many delivery systems—even some very large ones—do not have these capacities.

In 2000, AHRQ created the Integrated Delivery System Research Network (IDSRN), a field-based research network that tests ways to improve quality within some of the most sophisticated health plans, systems, hospitals, nursing homes, and other provider sites in the country. 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.

In the past year, provider-researcher teams have been working on ways to reduce falls in nursing homes and ways to limit medication errors. Often we partner with others in the Department on these efforts. For example, CMS asked AHRQ to develop a handbook on ways to improve cultural competency of health care providers. CMS is now using this handbook as a key part of their training for Medicare and Medicaid providers. One IDSRN developed a tool to help hospitals prepare for bioterrorist events and other emergencies. The American Hospital Association has since shared this tool with all of their members and now provides technical assistance on how to use it.

A new tool produced by Denver Health, another of AHRQ's IDSRN partners, helps State and local officials quickly locate alternate health care sites if hospitals are overwhelmed by patients due to a bioterrorism attack or other public health emergency. The alternate care site selection tool was shared with emergency response planners at the 2004 Summer Olympics in Athens, Greece, and it is included in a new report, *The Rocky Mountain Regional Care Model for Bioterrorist Events*.

Improving Primary Care through Practice-Based Research Networks

AHRQ began supporting 36 practice-based research networks (PBRNs) in 2003. These networks directly involve about 10,000 family physicians, pediatricians, general internists, and nurse practitioners, whose practices are spread across all 50 States, and who provide care for about 10 million patients.

IDSRN Partners and Their Collaborators

Partner: Abt Associates, Inc., Cambridge, MA
Collaborator: Geisinger Health System

Partner: Center for Health Care Policy and Evaluation, UnitedHealth Group, Minneapolis, MN
Collaborators: Allina Health System, RAND, Health Systems Innovations

Partner: Denver Health, Denver, CO
Collaborators: University of Colorado Health Sciences Center, Colorado Prevention Program

Partner: Emory Center on Health Outcomes and Quality (formerly USQA Center for Health Care Research), Atlanta, GA
Collaborator: Aetna

Partner: Kaiser Foundation Research Institute, Kaiser Permanente of Northern California, Oakland, CA
Collaborators: Kaiser Permanente—Northwest, Southern California, Colorado, Georgia, Hawaii, Group Health Cooperative of Puget Sound; Harvard Pilgrim Health Care; Health Partners Research Foundation; Henry Ford Health System; Lovelace Health Systems; Fallon Health Care System

Partner: Marshfield Medical Research and Education Foundation, Marshfield, WI
Collaborators: Project HOPE Center for Health Affairs, CODA, Inc.

Partner: Research Triangle Institute-UNC, Research Triangle, NC
Collaborators: Intermountain Health Care; University of North Carolina at Chapel Hill; UNC Health Care; CareOregon; Summa Health System; Providence Health System; MayaTech Corp.; University of Pittsburgh Medical Center

Partner: University of Minnesota, Division of Health Services Research and Policy, Minneapolis, MN
Collaborators: Blue Cross Blue Shield of Minnesota; Institute for Clinical Systems Improvement; Medical Group Management Association; Allina Health System; Institute for Research and Education, HealthSystem Minnesota; Delta Rural Health Consulting

Partner: Weill Medical College of Cornell University, New York, NY
Collaborators: New York Presbyterian Healthcare System; Joseph L. Mailman School of Public Health of Columbia University; North Shore University Hospital; Memorial Sloan-Kettering Cancer Center; Health Watch

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. These networks facilitate the sharing of ideas, questions, observations, and resource information with greater frequency than a single practice normally would be able to maintain. Through cooperative agreements, AHRQ supports 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 comprising mostly inner-city practice or community health centers, serve large

minority and low-income patient populations. In addition to several regional networks, the group includes four national networks managed by major primary care professional organizations: the American Academy of Family Physicians, the American Academy of Pediatrics, the American College of Physicians, and the Ambulatory Pediatric Association.

In 2003, AHRQ had awarded eight small research grants to existing PBRNs to conduct exploratory/pilot projects or feasibility studies for a range of issues including prevention of adolescent smoking and childhood obesity, use of electronic medical records to improve care, and the application of tools for translating research into practice.

In 2003 AHRQ also worked collaboratively with the Robert Wood Johnson Foundation (RWJF) to develop the Prescription for Health initiative, a two-phase $9 million 5-year national program. Under this initiative, primary care PBRNs are funded to develop creative, practical strategies for promoting healthy behaviors among patients. The program targets four health-risk behaviors that are the nation's leading causes of preventable disease and premature death: lack of physical activity, poor diet, tobacco use, and risky use of alcohol. The 17 PBRNs funded for Phase I of the program completed a diverse set of projects including the redesign of practices, implementation of effective interventions, and the development of tools to link practices with community resources.

Other new PBRN projects funded by AHRQ in 2004 include:

- **Delivery of Preventive Services in Primary Care.** The Center for Family Medicine Research at the University of Oklahoma and the Oklahoma Physicians Resource/Research Network, in collaboration with Medical Data Solutions, Inc., (a software development company) are studying the effectiveness of a multi-component intervention to translate three office system strategies known to increase delivery of immunizations and other preventive services. The translational intervention includes medical record audits with feedback and benchmarking, academic detailing, a practice enhancement assistant, and a computer application designed to help the practice incorporate and maintain the office system strategies.
- **QuitLink: A leveraging solution to tobacco counseling.** The Virginia Ambulatory Care Outcomes Research Network is partnering with the American Cancer Society to test a three-part intervention strategy to offer counseling and pharmacotherapy to patients who use tobacco at 16 primary care practices in Virginia. The intervention includes: (1) using vital signs to prompt nurses or medical assistants to determine the patient's use of tobacco, offer brief advice, and assess readiness to quit as vital signs are obtained; (2) inviting tobacco users who are prepared to quit to get proactive counseling provided by the American Cancer Society through three, 30-minute telephone sessions; and (3) feedback from the American Cancer Society, requests for prescription aids in support tobacco users attempts to quit, progress reports, and quarterly analyses of practice and clinician team referral outcomes.

- **Improving Diabetes Efforts Across Language and Literacy.** The UCSF Collaborative Research Network (CRN) is implementing the Improving Diabetes Efforts Across Language and Literacy (IDEALL) Project. This intervention uses both an automated telephone diabetes management program and group medical visits to introduce self-management support strategies to patients with diabetes and their providers. Researchers are comparing the effects of both interventions with respect to each other as well as to usual primary care as well as patient outcomes, the success of implementation, and maintenance of the programs.
- **Evaluating a Patient-Centered Diabetes Registry.** Researchers are implementing a patient-centered registry for improving diabetes care using a registry where both patients and practices can enter data and receive information tailored to their needs about diabetes care and self-management. The effectiveness, adoption, and implementation during all phases of developing and testing will also be evaluated.

Monitoring the Nation's Health Care Safety Net

The health care safety net—the Nation's system of providing health care to low-income and other vulnerable populations—has been described as "intact but endangered." AHRQ and the Health Resources and Services Administration (HRSA) are leading a joint initiative to monitor it. The goal of this joint initiative is to help local policymakers, planners, and analysts monitor the status of their local safety nets and the populations they serve. Strategies include providing baseline data and a set of tools that enable monitoring of the capacity and performance of local safety nets with four main goals:

- Provide baseline information and an assessment of policymakers' information needs for the safety net system and its environment.
- Establish an early warning system to alert policymakers to changes in safety net capacity and stability.
- 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.
- Develop and implement a research agenda on safety net and access-related issues for low-income populations.

"Enhancing the Safety Net Through Data-Driven Policy" is an intensive technical assistance project that is part of the safety net monitoring initiative. It is designed to help policymakers in three States develop a series of data-driven recommendations to enhance the strength and stability of their health care safety net(s). As part of the project, interdisciplinary State teams will:

- Demonstrate the practical application of the safety net monitoring initiative data and tools.

- Use the data and tools as the basis for crafting their own policy initiatives to strengthen and sustain the health care safety net.
- Receive technical assistance to build on the innovative practices others have used to address similar challenges.

This project gives States the opportunity to learn about new data and current research from Federal officials and nationally recognized experts, as well as promising State practices from peers in other States.

Two data books were published in 2003 that describe the current status of the safety net. The first, *Monitoring the Health Care Safety Net—Book I: A Data Book for Metropolitan Areas*, presents data from 90 metropolitan areas, including 355 counties and 172 cities in those areas. It provides extensive data tables as well as an overview of the findings from the measures included. The second book, *Monitoring the Health Care Safety Net—Book II: A Data Book for States and Counties*, shows data from over 1,800 counties across 30 States and the District of Columbia, including both metropolitan and nonmetropolitan counties. The third and last product from the initiative, *Monitoring the Health Care Safety Net—Book III: Tools for Monitoring the Health Care Safety Net,* was published in 2004 and offers strategies and concrete tools for assessing local health care safety nets.

The information presented in these books can assist State and local health officials, planners, and analysts in assessing the capacity and viability of their existing safety net providers, and it can help them understand the characteristics and health outcomes for the populations served.

Recent Findings on Safety Net Projects

A survey of more than 2,000 medical school faculty involved in direct patient care found large gaps exist between nonpaying and paying patients in referrals to specialists, access to technologically advanced care, outpatient mental health and substance abuse treatment, and even routine inpatient care.

Nearly one-fourth of clinical faculty reported that they were rarely or never able to obtain nonemergency hospital admissions for uninsured patients. Nearly one in five clinical faculty felt that they were discouraged by their group practice or hospital from seeing too many indigent patients, and more than one in ten reported that their group practice placed formal limits on the number of patients or the amount of care they could provide.

At teaching hospitals, faculty practices must finance their charity care through revenues from paying patients. However, they do so without the subsidies from Medicare and Medicaid that are available to hospitals serving a disproportionate number of poor and uninsured patients. The second most common reason given for limiting care to the uninsured was inadequate reimbursement.

Chapter 4. Areas of Special Interest

System Capacity and Bioterrorism

AHRQ, through its bioterrorism and response activities, supports research in assessing and improving the U.S. health care system's capacity to respond to possible incidents of bioterrorism. These research projects examine an array of issues related to clinicians, hospitals, and health care systems, as well as linkages among these providers, local and State public health departments, emergency personnel, and others preparing to respond to terrorist events and other public health emergencies, along with regional planning and surge capacity issues. This work is also an essential component to CDC and HRSA investments.

System capacity and bioterrorism research spans nine key areas; (1) Models for medication/vaccine distribution; (2) Understanding the role of State and regional models for preparedness; (3) Defining, measuring, and demonstrating surge capacity within the health care system; (4) The unique issues related to pediatric care and bioterrorism; (5) The role of health information technology in detecting, tracking, and providing real-time decision support to clinicians; (6) Methods and best practices for clinician training; (7) Further development of health care system/public health linkages; (8) Translating research into practice; and (9) Personal protective equipment, isolation/quarantine, and laboratories.

AHRQ recognizes that community clinicians, hospitals, and health care systems have essential roles to play in this infrastructure. To inform and assist these groups in meeting the health care needs of the U.S. population in the face of bioterrorist threats, AHRQ supports research that emphasizes the following research objectives:

- Emergency preparedness of hospitals and health care systems for bioterrorism.
- Need for enhanced capacity of ambulatory care, home and long-term care, care for psychosocial consequences, and other related services during and after a bioterrorist event.
- Information technology linkages and emerging communication networks to improve coordination between the personal health care system, emergency response networks, and public health agencies.
- Novel uses of health care system training strategies to prepare community clinicians to recognize and manage a bioterrorist event.

Disaster scenarios that once seemed merely theoretical have become a disturbing reality and represent a growing threat for a mass casualty incident. There is a clear need to determine the best ways to mitigate the potential impact of a mass casualty incident that could result in multiple victim that may overwhelm local resources and potentially could involve natural, biological, chemical, nuclear, or other agents.

In FY2004, AHRQ sponsored a series of free Web-assisted bioterrorism audio conference calls on surge capacity and health system preparedness. Surge capacity is a health care system's ability to rapidly expand beyond normal services to meet the increased demand for qualified personnel, medical care, and public health in the event of bioterrorism or other large-scale public health emergencies or disasters. These 90-minute audioconferences were designed to share the latest health services, research findings, promising practices, and other important information with State and local health officials and key health system decisionmakers. Topics that were covered included:

- Education and training for a qualified workforce.
- Facilities and equipment.
- Surge capacity in a mass casualty event.
- The role of information/communication technology and monitoring/surveillance systems in bioterrorism preparedness.

Three regional and national conferences were held for State and regional bioterrorism decisionmakers and responders focusing on tools and models for planning and preparedness.

Bioterrorism Preparedness

Five new grants totaling nearly $5 million have been funded under AHRQ's grant program, "Building the Evidence to Promote Bioterrorism and Other Public Health Emergency Preparedness in Health Care Systems." Each of the five grants addresses surge capacity. The new awards were made to:

- Weill Medical College, Cornell University in New York, "Modeling the U.S. Health System's Epidemic Response Capacity" ($840,262).
- Johns Hopkins University School of Medicine in Baltimore, "Discharge Criteria for Creation of Hospital Surge Capacity" ($911,199).
- University of Florida in Gainesville, "Bioterrorism Preparedness in Rural and Urban Communities" ($889,072).
- Vanderbilt University Medical Center in Nashville, "Preparing Volunteer Nurses for Public Health Emergencies" ($1,090,145).
- Johns Hopkins University in Baltimore, "Evaluation of Bioterrorism Training for Clinicians" ($991,843).

Recent Bioterrorism Research Findings and Products

- During FY2004, AHRQ published the evidence report, *Training of Hospital Staff to Respond to a Mass Casualty Incident*. The report reviews the published evidence regarding the usefulness of the following approaches in training staff to respond to a mass casualty incident: hospital disaster drills, computer simulations, and tabletop or other exercises, as well as the methods and tools that have been used in evaluating these approaches. The review revealed that the evidence is limited. Enough studies were available to suggest that hospital disaster drills can help to identify problems with incident command, communications, triage, patient flow, security, and other issues. The evidence also indicated that computer simulations and tabletop and other exercises may help to train key decisionmakers in disaster response. However, the evidence was insufficient to support firm conclusions about specific training methods or the usefulness of reported evaluation methods. The report notes that future disaster preparedness efforts would benefit from increased reporting of hospitals' experiences in disaster response training.
- Denver Health, one of AHRQ's IDSRN partners, produced an alternate care site selection tool to help State and local officials quickly locate alternate health care sites if hospitals are overwhelmed by patients due to a bioterrorist attack or other public health emergency. A complete description of the tool is included in a new report entitled *Rocky Mountain Regional Care Model for Bioterrorist Events*. The alternate care site selection tool was shared with emergency response planners at the 2004 Summer Olympics in Athens, Greece. In the aftermath of a bioterrorist event or other public health emergency, hospitals may be overwhelmed by a sudden influx of patients. The new alternate care site selection tool is designed to allow regional planners to locate and rank potential alternative sites—stadiums, schools, recreation centers, motels, and other venues—based on whether they have adequate ventilation, plumbing, food supply, and kitchen facilities, for example.
- A new planning guide from AHRQ was designed to help communities across the Nation make sure that appropriate drugs and vaccines are available to everyone who needs them in the event of a natural epidemic or bioterrorist attack. The guide was developed with AHRQ support by a team of researchers in the Department of Public Health at Weill Medical College of Cornell University and New York-Presbyterian Hospital. This new guide complements the *Strategic National Stockpile Guidebook* prepared by the CDC, which includes a chapter on dispensing medications and vaccines. It is designed to help State, county, and local officials comply with Federal requirements for public health emergency planning by:
  - Providing a framework for understanding the components of epidemic outbreak response (surveillance, stockpiling, distribution, dispensing, and followup care) and the planning and implementation of dispensing operations using specially designated dispensing clinics.

- Applying these concepts to develop model pill-dispensing and vaccination clinics run on the Bioterrorism and Epidemic Outbreak Model (BERM), a computer staffing model (also developed by Weill Medical College of Cornell University under contract to AHRQ) that can be customized to meet local community needs.
- Discussing implementation of a command and control framework for dispensing clinics based on the CDC's National Incident Management System.

- In FY 2004, AHRQ published a series of five issue briefs that summarize the Agency's Web-assisted conferences on bioterrorism and health system preparedness.

HIV/AIDS in the United States

The impact of new drug therapies on the longevity and progression of HIV disease has been dramatic. As a result, today HIV disease may be thought of as a moderately expensive chronic disease rather than a catastrophically expensive fatal illness. Drugs such as protease inhibitors, in combination with other antiretroviral medications, have dramatically improved the lives of HIV-infected patients.

More than 950,000 people in the United States have been diagnosed with HIV or AIDS, and this number grows by 40,000 each year. However, a recent study by AHRQ showed a substantial decline in HIV-related hospitalizations in eight States from 1996 to 2000. In these States, where more than 52 percent of AIDS patients were living at the time, HIV-related hospitalizations declined from 114,885 in 1996 to 77,694 in 2000.

AHRQ's HIV/AIDS Research Agenda

The HIV Cost and Services Utilization Survey (HCSUS) was the first study to examine the health status and health care use of a nationally representative sample of adults infected with HIV. Data from HCSUS have been used to address a number of policy-relevant issues, such as variations in access to antiretroviral therapy.

Research supported by AHRQ and conducted under a cooperative agreement between RAND and AHRQ has helped the HRSA to examine the delivery of services offered under the Ryan White CARE Act.

Data from the HIV Cost and Services Utilization Study (HCSUS) provided information on a nationally representative sample of HIV-positive people in care and was useful in answering Congressional inquires. The research helped HRSA's HIV/AIDS Bureau to confirm that the CARE Act was reaching and serving the populations that the Ryan White funds were directed by Congress to serve. These vulnerable and underserved populations included people who had low incomes, or no income, and people who had little or no insurance or were on Medicaid.

HSCUS estimated the number of people who were treated for HIV disease. This is extremely important as it gives statisticians a basis for assumptions or estimates for predicting future needs and planning for services. Until recently, HIV was not a reportable disease. And some of the biggest states with the largest number of cases, such as California and New York, were just beginning to do it. This lack of reporting made predicting service needs more difficult.

The Federal Ryan White CARE Act provides primary health care and support services for people with HIV disease. Enacted in 1990, it fills gaps in care faced by those with low-incomes and little or no insurance. HRSA's HIV/AIDS Bureau administers the program through hundreds of grantees, which serve an estimated 533,000 people each year.

HIV Research Network

The HIV Research Network (HIVRN) comprises 17 HIV care providers around the country who share information and data so that they can learn from each other on ways to improve quality of care for patients with HIV. The network provides timely aggregate information to policymakers and other providers interested in improving quality and answering other questions about access and cost of care for people with HIV. Through the work of this network and other large HIV care providers, AHRQ is looking to identify and remedy major causes of prescribing errors for patients with HIV. Data collection for HCSUS ended in early 1998. Data from the HIV Research Network cover the period of 2000 through 2002, with more recent data currently being collected. Thus, although not nationally representative, HIV data provide a more recent view of HIV-related service delivery.

The goal of the HIVRN is to obtain, analyze, and disseminate current information on the delivery of services to people with HIV infection. Treatment of HIV infection is complex. New drugs are being developed rapidly, and treatment guidelines change frequently. 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 HIVRN was designed to disseminate this information widely, using the most recent available data.

The HIVRN is sponsored by several Federal agencies: AHRQ, the Center for Substance Abuse Treatment in the Substance Abuse and Mental Health Services Administration (SAMHSA), the HIV/AIDS Bureau in HRSA, and the Office of AIDS Research in the Office of the Director of the National Institutes of Health (OAR/NIH).

HIVnet

Health officials and others can access HIV data online through AHRQ's HIVnet at http://www.ahrq.gov/data/hivnet.htm. HIVnet is a tool that provides information on inpatient and outpatient utilization by people with HIV disease. This information is valuable for service providers, program planners, policymakers, and health services researchers. HIVnet is focused on health services delivery. It does not contain information on outcomes of treatment for HIV infection or on how to access HIV-related services in the community. HIVnet provides easy access to selected statistics on patterns of HIV-related care.

At present, statistics displayed on the HIVnet are derived from the 12 medical practices that provided comprehenstive resource utilization data for the year 2000. The statistics combine data from the 12 sites. HIVnet enables users to examine resource utilization for specific demographic and clinical subgroups. However, to ensure confidentiality, HIVnet does not contain any information that could be used to identify individual patients or practices or a particular geographic region of the country.

Recent Research Findings

- According to a study supported by AHRQ, 67 percent of patients with HIV disease reported suffering from pain. Patients reporting or developing more pain and those in poorer health used more outpatient services. Individuals who did not report pain at first or second followup after the outpatient visit were predicted to have 5.20 outpatient visits; those who had no pain at first followup but developed maximum pain by the second followup were predicted to have 6.94 visits; and those with maximum pain at first and second followups were predicted to have 7.24 visits. Improved pain management in these patients and identification of those at risk for developing pain could reduce their use of outpatient care, lead to substantial cost savings, and improve quality of life for affected individuals
- AHRQ researchers found that women with HIV disease are much less likely than men with HIV to receive potentially life-prolonging drugs even though they have private health insurance that would help pay for the drugs. Only 39 percent of women with HIV disease enrolled in the health insurance plans of 24 large employers across the country were provided antiretroviral drugs for HIV disease in 2000, compared with 71 percent of men with HIV enrolled in the same plans. The researchers further found that among adults treated with antiretroviral therapy, women (31 percent) were only half as likely as men (63 percent) to be prescribed the newer, more effective, and more costly protease inhibitor and/or non-nucleoside reverse transcriptase inhibitor drugs. This disparity in prescribing for men and women was reflected in prescription drug expenditures. The average

annual drug expenditure for men, $9,037, was more than twice the $3,893 spent for women's medications. Women, on average, had total health care expenditures of $10,397 in 2000, while total health care expenditures for men averaged $16,405 that year. Almost all of this difference resulted from lower payments for drugs for women with HIV disease.

Promoting Evidence-Based Policy and Practice

Outreach to Health Care Providers, Purchasers, and Health Officials

AHRQ's Division of User Liaison and Research Translation (ULRT) works closely with health care administrators, purchasers, and State and local policymakers so that they will find it easier to use evidence when making decisions about health care services and policy. In FY 2004, AHRQ began transitioning its program from a primary focus on dissemination of research findings to an emphasis on putting evidence into practice. ULRT worked on developing strategies that would help identify stakeholders who would be successful as they implement care management programs, develop programs to decrease health care disparities among disadvantaged children with asthma or diabetes, improve patient safety, and enhance purchaser-provider synergies. Several of these strategies are taking the shape of learning networks—people engaging in a process of collective learning facilitated by in-person meetings, Web-assisted events, and on site technical assistance.

In addition to providing information and tools to make informed decisions and implement successful practices and policy, ULRT serves as a bridge between the program's stakeholders and the health services research community by bringing back to the Agency the research questions being asked by key policymakers and decisionmakers. While ULRT was planning its new strategies, it continued its efforts to inform AHRQ stakeholders about important research and practice developments.

A series of audio conferences focused on quality-based purchasing to help plans and providers prepare for and participate in quality-based purchasing and public reporting initiatives. These conferences included:

- "Paying for Performance," which featured a look at the current evidence base for quality-based purchasing with an emphasis on practical implications for purchasers and providers.
- "Using Quality Indicators for Hospital-Level Public Reporting and Payment," which provided guidance on the benefits and limitations of using AHRQ's Quality Indicators for public reporting of quality or to inform purchasing decisions.

ULRT also sponsored a Web conference: "Obesity: Latest Evidence on Prevention and Treatment." Objectives of the Web conference included helping participants better understand coverage issues related to obesity and the process used by CMS to make coverage decisions; differentiating among various approaches for the prevention and treatment of obesity and identifying their strengths and limitations; and understanding the value of the emerging evidence base for the pharmacological and surgical treatment of obesity and its use in policy development.

ULRT supported the Agency's bioterrorism and health system preparedness efforts by sponsoring regional and national workshops in FY2004, including:

- Three regional workshops for State and regional bioterrorism decisionmakers,
- Five Web conferences.
- A special expert meeting on mass casualty medical care.

Research Translation for Health Care Policymaking

AHRQ's research translation team produces 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 these experiences and related research from the field. Reports published in FY2004 include:

- *Hospital Nurse Staffing and Quality of Care*. This report indicates that hospitals with lower nurse staffing levels, nurses who spend less time with patients, or have fewer registered nurses compared with licensed practical nurses or nurses' aides tend to have higher rates of poor patient outcomes, including pneumonia, shock, cardiac arrest, and urinary tract infections.
- *Programs and Tools to Improve the Quality of Mental Health Services*. This report highlights AHRQ-funded research that has led to the development of programs, methods, and tools for evaluating and improving the quality of mental health services and improving the education of mental health professionals. It details quality improvement programs for care and outcomes in treating depression, a screening tool that helps identify children and adolescents at risk for suicide, a consumer ratings assessment that can improve behavioral health services, and a conference that provided solutions to improve provider training and continuing education.
- *Employer-Sponsored Health Insurance: Trends in Cost and Access*. This report highlights data from AHRQ's Medical Expenditure Panel Survey about health insurance obtained through an employer for the period 1996 through the first half of 2003. U.S. employers provide health insurance to nearly two-thirds of the population under age 65. In general, the higher the employee contribution is, the less likely

employees are to enroll. Employment-related insurance coverage among Hispanic men declined 13 percent between 1987 and 1996, and by 2003, 38.5 percent of Hispanic men under age 65 were uninsured, compared with 16.2 percent of white men. The percentage of full-time employees who worked where health insurance was offered to retirees fell between 1998 and 2000.

- *Women and Domestic Violence: Programs and Tools that Improve Care for Victims*. This report describes training programs and tools that health care providers, social workers, and facilities and their staff can use to provide better care for victims of domestic violence. It identifies gaps in research on domestic violence indicating a need to build a stronger evidence base for screening, detecting, and treating victims, and describes methods that health care providers can use to screen for and identify victims of domestic abuse, as well as tools that help providers counsel and treat victims and evaluate the quality of domestic violence programs.

National Reports on Health Care Quality and Disparities

AHRQ produces two congressionally mandated annual reports on the state of the Nation's health care quality. By consolidating information on quality from a number of sources, the *National Healthcare Quality Report* (NHQR) provides a comprehensive picture of health care quality in the United States. Similarly, the *National Healthcare Disparities Report* (NHDR) documents differences in health care services for and among priority populations (women, children, racial and ethnic minorities, low-income, urban, rural, people with chronic disease and disability, and people at the end of life) specified in AHRQ's reauthorizing legislation. These reports provide a general picture of health care quality and discuss a number of selected conditions, including cancer, end-stage renal disease, diabetes, heart disease, HIV/AIDS, maternal and child health, mental illness, respiratory disease, nursing home care, and home health. Both reports provide a roadmap for improvement that communities can use to improve quality and reduce disparities in health care.

AHRQ completed work on the inaugural editions of the reports in FY2003. The second annual reports released in 2004 find both evidence of improving quality as well as specific areas in which major improvements can be made, and they indicate that there are disparities related to race, ethnicity, and socioeconomic status in the American health care system. Both reports extend the baseline data on quality and disparities within health care delivery provided in AHRQ's 2003 reports.

National Healthcare Quality Report

The *Quality Report* identifies three key themes important to policymakers, clinicians, health system administrators, community leaders, and others who work in health care services. The report indicates that:

- Quality is improving in many areas, but change takes time.
- The gap between the best possible care and actual care remains large. Quality of care remains highly variable across the country.
- Further improvement in health care is possible. Best practices have been identified, and collaborative, focused efforts among key stakeholders have produced impressive and inspiring gains.

In comparison to data reported in the *2003 Quality Report*, modest improvement has been noted in many of the report's quality measures. Across the entire set of *Quality Report* measures, quality has improved by approximately 3 percent versus data reported in the 2003 report. These include selected measures used by CMS, the Joint Commission on Accreditation of Healthcare Organizations, the National Committee for Quality Assurance, and others reporting on quality in hospitals, nursing homes, home health agencies, and other settings. In addition, since the *2003 Quality Report,* improvements have been made in specific measures related to health care delivery.

The greatest changes were in the following:

- A decrease of 37 percent from 2002 to 2003 in the percentage of nursing home patients who have moderate or severe pain.
- A decrease of 34 percent from 1994 to 2001 in the hospital admission rate for uncontrolled diabetes.
- A decrease of 34 percent from 1996 to 2000 in the percentage of elderly patients who were given potentially inappropriate medications.

Quality remains variable across the country. However, improvements were seen in many areas at the State level. Some of these notable improvements are:

- Minnesota – Largest improvement in State rank for mammogram testing rates.
- Alabama – Only State to significantly increase screening rates for two recommended tests for colorectal cancer.

National Healthcare Disparities Report

The *2004 National Healthcare Disparities Report* presents data on the same clinical conditions and other measures as the Quality Report but focuses on priority populations, including women, children, the elderly, racial and ethnic minority groups, low-income groups, residents of rural areas, and individuals with special health care needs, specifically children with special needs, people in need of long-term care, and people requiring end-of-life care.

The *2004 Disparities Report* identifies three key themes:

- Disparities are pervasive.
- Improvement is possible.
- Gaps in information exist, especially for specific conditions and populations.

A subset of measures with the comparable data for 2000 and 2001 is highlighted in the *2004 Disparities Report*. In both years:

- Blacks received poorer quality of care than whites for about two-thirds of quality measures, and they had worse access to care than whites for about 40 percent of access measures.
- Asians received poorer quality of care than whites for about 10 percent of quality measures, and they had worse access to care than whites for about a third of access measures.
- American Indians and Alaska Natives received poorer quality of care than whites for about a third of quality measures, and they had worse access to care than whites for about half of access measures.
- Hispanics received lower quality of care than non-Hispanic whites for half of quality measures, and they had worse access to care than non-Hispanic whites for about 90 percent of access measures.
- Poor people received lower quality of care for about 60 percent of quality measures and had worse access to care for about 80 percent of access measures than those with high incomes.

The *2004 Disparities Report* found improvement in care provided to the Nation's poor, uninsured, and minorities through federally supported health centers. These centers, administered by HRSA, focus specifically on providing care to vulnerable populations. In 2004, over 3,600 health centers sites delivered primary and preventive care to 13.2 million people.

Availability of the Reports

The National Healthcare Quality Report and National Healthcare Disparities Report are available on AHRQ's QualityTools Web site at http://www.qualitytools.ahrq.gov. The site serves as a Web-based clearinghouse to make it easier for health care providers, policymakers, purchasers, patients, and consumers to take effective steps to improve quality.

Chapter 5. Research on Health Care for Priority Populations

Not all Americans have full and equal access to the best quality health care. As a part of the Agency's overall research portfolio, AHRQ supports and conducts research and evaluations of health care for priority populations. Although emphasis is placed on disparities related to race, ethnicity, and socioeconomic status, research also focuses on the delivery of health care in inner-city and rural areas (including frontier areas) and on priority populations with unique health care needs or issues that require special attention. AHRQ's priority populations include low-income groups, minority groups, women, children, the elderly, and individuals with special health care needs, including individuals with disabilities and those who need chronic care or end-of-life health care. Further, the Agency supports dissemination of health services research to promote broadening access to effective health care services and the elimination of health disparities.

Health Care for the Elderly, Minorities, Women, and Children

AHRQ's research emphasizes the needs of priority populations, who are generally underserved by the health care system and underrepresented in research. Disparities in health care have been well-documented in recent years. These disparities span a broad range of medical conditions and health care delivery issues. For example:

- An AHRQ-funded study indicates that African-American and Hispanic children in the United States who are 6 to 11 years of age are significantly more likely than non-Hispanic white children of the same age to be overweight.
- Moderately obese white women are 17 percent less likely to have had a mammogram than normal weight white women. Compared with normal weight black women, mammography use was similar or higher in overweight, mildly obese, and moderately obese black women.
- Over three-fourths of low-income black women in each of three age groups (65-74, 75-84, and 85 and older) underestimate their own risk of getting breast cancer. Women ages 85 and older are the least likely to have had a mammogram or clinical breast examination within the past year.
- Compared with men, women are less aggressively screened and treated for cholesterol problems, despite the fact that cardiovascular disease (CVD) is the leading cause of death among women. Studies that examine people with CVD indicate that men have cholesterol measured more often, are treated more aggressively (for example, with statin drugs), and have lower levels of low-density lipoprotein cholesterol (the so-called "bad" cholesterol), than women.

Participation in Research Studies

Individuals usually must be able to read and write English in order to be included in most U.S. research studies that assess quality of life and other patient-reported outcomes. Barely literate and non-English-speaking patients often are excluded from many because they are unable to complete the required set of questionnaires; however, an AHRQ-funded study found that a user-friendly talking computer touchscreen may solve this problem. Questions that are presented on the computer touchscreen, are accompanied by a recorded reading of the question. Various colors, fonts, and graphic images are used to enhance visibility, and a small picture icon appears near each text element that allows patients to replay the sound as many times as they wish.

The talking touchscreen will allow low-literacy patients to be included more readily in clinical trials, clinical practice research, quality of life studies, and health promotion/disease prevention initiatives. Recently, the program was adapted for Spanish-speaking cancer patients, and it may prove to be a good communication tool for health care providers and organizations, as they incorporate cultural competency principles into health services delivery practices for minorities and other underserved groups.

Elderly Health

About one in every eight Americans is age 65 and over, representing an elderly population of over 35 million people. By the year 2030, the elderly population will more than double to 71.5 million. Most older people have at least one chronic condition and over half report a disability. AHRQ's support of research on the cost-effectiveness of care for the elderly helps inform health care discussions that may affect changes in health benefits and financing mechanisms, including those relating to the Medicare and Medicaid programs. Creating and translating new knowledge into practice, as well as improving the uptake of what is already known about high quality care for older people, continue to be key issues facing the health services research community and primary care providers.

Examples of Ongoing Research

- Researchers at Purdue University in Indianapolis are conducting a 4-year randomized controlled clinical trial designed to test the efficacy of an Integrated Program of Collaborative Care in improving the outcomes of care for older adults with Alzheimer Disease in a primary care setting. The study will also describe the prevalence of dementia disorders and associated comorbidity and will measure utilization, costs, use of community services, and the costs associated with the intervention.

- A project underway at the University of California in San Francisco will measure mortality, functional change, hospitalization, and quality of life in frail patients who continue to live in the community even though they are eligible to live in a nursing home . The study population is a group of patients at 12 national sites of the Program of All-Inclusive Care for the Elderly (PACE), a rapidly expanding program that provides care for patients in the community that have been certified as eligible for nursing homes. The products of this research represent a critical first step in developing methods to measure variations in outcomes and the quality of care, developing interventions to improve care of frail elders, and assessing the effectiveness of the rapidly growing PACE program.
- A study at Thomas Jefferson University is attempting to illuminate the decisionmaking processes underlying advance directives in order to enhance communication between health providers and patients and provide guidance for the construction and timing of advance directives. Researchers will test whether preferences for years of desired life and invasive medical treatments change as an individual's health and functioning deteriorate and if altering the description of advance-directive-style options (i.e., providing a description of palliative care vs. treatment) may influence preferences for treatments under various medical scenarios.
- A program developed at the University of Pittsburgh will attempt to address health disparities in minority adult Americans by better preparing researchers from minority and majority populations to conduct research on ways to eliminate disparities. Four projects are being conducted during the course of this program: (1) eliminating disparities in adult immunization; (2) patient-provider communication regarding cancer screening; (3) an intervention evaluation study to control lipid disorders and hypertension in African-American males; and (4) using oral histories to improve patient-provider interaction.

Examples of Recent Findings

- One in five (21 percent) of elderly individuals has filled a prescription for a drug that in general should be avoided in patients aged 65 and older. In addition, nearly half (44 percent) of these prescriptions were for drugs that carry a substantial risk of adverse effects in elderly patients.
- Although people older than 75 years have a slower rate of physical recovery from coronary artery bypass graft surgery than elderly patients who are younger, they gain similar health benefits from the procedure. An AHRQ-funded study showed that the older group's physical function scores were significantly lower than the younger group until 1 year, confirming a slower recovery of physical function. However, recovery speed for angina relief and quality of life improvement did not differ by age.

- Through 2001, only 63 to 65 percent of elderly individuals in the United States had been vaccinated against influenza and pneumonia. Practices that allot more time for acute care visits and use more immunization promotion activities have higher vaccination rates:
  – Practices that allotted 16-20 minutes versus 10-15 minutes for acute care visits had influenza vaccination rates that were more than twice as high.
  – Practices that did not have a source of free vaccines had 57 percent fewer influenza vaccinations.
  – Practices that were urban/suburban and had a source of free flu vaccines had four times as many influenza vaccinations.
  – Practices that had three or more immunization promotion strategies—such as designated vaccination clinics, computerized immunization tracking systems, prompts on patient charts, and a source of free or reduced-cost vaccinations—had twice as many pneumonia vaccinations.

Minority Health

Although the overall health of Americans has improved dramatically over the last century, racial and ethnic minorities continue to face challenges in accessing high quality care. Racial and ethnic minorities are more likely than non-Hispanic whites to be poor or near poor, and they often experience worse access to care and lower quality of preventive, primary, and specialty care. Closing the gap for minority populations is a major priority for the Department of Health and Human Services and for AHRQ. AHRQ has been funding and conducting research on topics relevant to minority health for many decades.

Examples of Ongoing Research

- Research at the Morehouse School of Medicine emphasizes the identification of health care intervention opportunities and best intervention strategies for low-income children and chronically ill African Americans who primarily receive care from community providers in inner-city and rural communities. The overall long-term objectives of this research are to assess, inform, and expose clinical faculty, health care consumers, community health care providers, and health agency partners to an extensive knowledge base of intervention opportunities and intervention strategies for improving health care access and quality of services for vulnerable African Americans.
- Researchers at the Medical University of South Carolina are developing collaborative management of Type 2 diabetes in black Americans and investigating how culturally sensitive collaboration is crucial to changing the poor outcomes of Type 2 diabetes in blacks. The three specific aims are to identify the knowledge, beliefs, and attitudes of black patients that impact their diabetes outcomes, identify impediments to improved diabetes outcomes in blacks that are

attributable to health care providers, and to identify external factors that impact on diabetes outcomes in blacks.

- Training medical interpreters for Navajo patients with diabetes through a project at the University of New Mexico at Albuquerque may improve diabetes outcomes and health care utilization patterns. The State of New Mexico includes a significant portion of the Navajo Nation, which is the second largest American Indian tribe. Navajo people have 2.5 times the rate of diabetes compared with the general population. Researchers hope to improve patients' diabetes knowledge, and self-care practices.
- Researchers at the Mount Sinai School of Medicine in New York are conducting a randomized controlled trial to test the effectiveness of a nurse case management intervention to improve hypertension control among blacks and Hispanics living in East and Central Harlem and evaluate the effectiveness of a nurse-managed computerized physician reminder system coupled with improved patient education. The project will also assess the effectiveness of a computerized reminder system with feedback on improving underuse of effective local and systemic adjuvant treatments for breast cancer as well as the magnitude of underuse of treatments for managing premature births.

Examples of Recent Findings

- Black men in the United States have a much higher cancer incidence than white men because of occupational exposure to known carcinogens. An AHRQ study that analyzed clinical data on men with non-Hodgkin's lymphoma, Hodgkin's disease, and soft-tissue sarcoma found:
  - Among black men, exposure to chromium dust—a known carcinogen often encountered in the metal, printing, paint, textile, and other industries—was associated with nearly four times the risk of non-Hodgkin's lymphoma.
  - Wood dust exposure was associated with nearly five times the risk of Hodgkin's disease and nearly four times the risk of soft-tissue sarcoma.
  - Black men who were exposed to pesticides and who reported working at a sawmill, pulp mill, or planing mill had nearly three-fold increases in their risk of soft-tissue sarcoma, although this risk did not reach statistical significance.
  - No significant occupational risk factors for cancer among white men were identified, suggesting that black men have greater exposure to carcinogens on the job than white men.
- Quality improvement programs that encouraged depressed patients to undergo standard treatments for depression (psychotherapy or antidepressant medication) and gave them and their doctors up-to-date information and resources to increase access to treatments reduced depression rates among black and Hispanic patients.

- White patients are twice as likely as black patients to receive coronary angiography (CA), an imaging procedure to diagnose heart problems, and revascularization procedures to correct these problems (coronary bypass surgery or coronary angioplasty). Fewer angiographies among black heart disease patients may be due in part to less access of black patients to cardiologists, who are more likely to recommend coronary angiography. Compared with white patients, black patients had 2.4 times greater odds than white patients of not obtaining a referral for CA, and 1.89 times greater odds of not receiving the procedure. However, this difference in receipt of CA was reduced to 1.4 among patients who received a referral for CA.
- Black patients undergo amputation of a lower extremity two to three times as often as white patients. A study funded by AHRQ suggests that greater severity and progression of peripheral arterial disease (PAD) or diabetes among blacks could account for these racial disparities independent of any access problems to hospitals for vascular surgery. Blacks were 1.7 times as likely as other patients to be admitted for a primary amputation, that is, a major amputation without any previous attempt at revascularization. However, after adjusting for age, sex, and diabetes mellitus prevalence, white and black patients were equally likely to undergo primary amputation. Repeat amputees were 2.5 times as likely to be black as white, but these patients had more advanced and aggressive PAD.

Women's Health

In 1900, the leading causes of mortality among U.S. women included infectious diseases and complications of pregnancy and childbirth. Today, the chronic conditions of heart disease, cancer, and stroke account for 63 percent of American women's deaths and are the leading causes of mortality for both women and men.

Women have a longer life expectancy than men, but they do not necessarily live those extra years in good physical and mental health. On average, women experience 3.1 years of disability at the end of life. Findings from the 2004 National Healthcare Quality and Disparities Reports indicate:

- Between 1998 and 2002, prenatal care for women in their first trimester improved; however, current rates are still below the Healthy People 2010 goal of 90 percent.
- For services unique to women, when compared with white women, both blacks and Hispanics receive poorer quality care for 75 percent of quality measures.
- Poor, near poor, and middle-income women had lower rates of both Pap tests and mammography than high-income women.
- Women tend to receive better preventive care for cancer and cardiovascular disease than men, while men tend to receive better treatment for end-stage renal disease and heart disease.

- Women were less likely than men to receive either a beta-blocker or aspirin on arrival at the hospit for a heart attack.

AHRQ supports research on all aspects of health care provided to women:

- Understanding differences between the health care needs of women and men.
- Understanding and eliminating disparities in health care.
- Empowering women to make better health care decisions.
- Enhancing the response of the health system to women's needs.

In FY 2004, AHRQ supported the following activities in women's health:

- With support from AHRQ, a research team at Brown University and Rhode Island Hospital developed the Women's Interactive System for Decisions on Menopause, or WISDOM©. During the course of development, AHRQ collaborated with leaders in the fields of women's health, evidence-based medicine, risk modeling, risk communication, medical informatics, Web design, and decision support aids. The tool can be found at http://www.medwisdom.org. Among the unique design features of the Web site are:
  - Comprehensive evidence-based information on menopausal treatments – The Web tool is an interactive matrix that can be manipulated to show the most effective treatments for the user's menopausal symptoms. The database includes herbal remedies as well as prescription medicines and can be sorted according to efficacy, treatment type, and symptom concerns.
  - Personalized risk assessment – Women can assess their 10-year and lifetime risks for cardiovascular disease (CVD), breast cancer, and osteoporotic hip fracture based on information they enter into the content database. The results are presented with bar graphs and text.
  - Prevention options – Women can view their personal risk for CVD, breast cancer, and hip fracture with and without treatment as well as the impact of those treatments on menopausal symptoms and life expectancy.
  - Contraindications – Women are informed if they have contraindications to any specific treatments.
  - Clinician summary – Women can print a summary of their information and results so they can discuss these results with their clinicians.
- AHRQ awarded a contract to the National Committee for Quality Assurance to conduct analyses of HEDIS data investigating differences between women and men in quality of care (prevention and treatment) related to cardiovascular disease and its risk factors as measured through HEDIS performance measures in a national sample of managed care plans. This information will be used to inform the development of recommendations for improving quality of care and eliminating sex-based differences in cardiovascular care.

- In April 2004, AHRQ convened a 2-day expert panel meeting to discuss issues related to "Improving the Use and Safety of Medications in Women Through Sex/Gender and Race/Ethnicity Analysis." The meeting brought together a multidisciplinary team of 35 science, clinical, and pharmacological experts to discuss and exchange information on the pharmacological dynamics of medications, how they differ between men and women, the impact of age, sex/gender, race, and ethnicity on dosing variances and how pharmacodynamics impact drug use and safety.

Examples of Ongoing Research

- Researchers at the Oregon Health & Science University are developing an evidence-based childbirth decision support tool to weigh the consequences for various childbirth methods. They will test its effectiveness to improve patients' shared decisionmaking and satisfaction, and reduce feelings of failure, anxiety, and postpartum depression. This Web-based tool will be widely accessible, providing an opportunity to overcome the economic, racial, linguistic, and ethnic disparities that currently exist in prenatal education and health outcomes.
- A randomized controlled study at the University of Arizona will assess the efficacy and effectiveness of acupuncture treatment of depression during pregnancy. Few medically acceptable treatments are available for the treatment of depression during pregnancy and preliminary work provides evidence that acupuncture may be a safe and acceptable treatment option for depression.
- Researchers at the Montefiore Medical Center in the Bronx, NY, are investigating the effectiveness of a domestic violence intervention and defining outcome measures for domestic violence interventions that incorporate patient, community, and expert viewpoints. This project will also explore the feasibility of monitoring these outcomes measures in this population and create a methodology for a cost-benefit analysis of domestic violence interventions.
- A project at the Medical College of Wisconsin is investigating the adverse psychological and social effects that false-positive mammograms can have on women. Researchers will compare two groups of women, those with false-positive mammograms and those with true-negative mammograms, with regard to days off work, perceived health status, physician visits, and medical expenditures. They will also evaluate associations with race, age, socioeconomic status, and comorbidity.

Examples of Recent Findings

- Colorectal cancer is the second leading cause of cancer death in the United States, yet AHRQ research indicates that morbidly obese women are nearly 6 percent less likely than others to be screened for colorectal cancer than normal weight women.
- Only 46 percent of older women with osteoporosis-related fractures receive treatment in the 6 months following a fracture to prevent further fractures as called for by clinical guidelines. Fewer than 12 percent of women are diagnosed

with osteoporosis prior to a fracture, even though nearly 11 percent have conditions—such hyperthyroidism or chronic renal failure or take medications like steroids or anticonvulsants—that would put them at risk for developing osteoporosis. In addition, more than one-third (39 percent) of these women are already at increased risk for falling due to medical problems like stroke and dementia or medications such as long-acting benzodiazepines or tricyclic antidepressants.

- Women with abnormal uterine bleeding who undergo hysterectomies experience greater improvement in their symptoms and express higher satisfaction with their overall health 6 months after treatment than women who are prescribed an alternate regimen of oral medication for the same condition. The women who had hysterectomies experienced greater improvements in mental health, sexual desire and functioning, sleep, and overall satisfaction with health.

- Out-of-pocket costs for oral contraceptive pills (OCPs) and the inconvenience of making monthly pharmacy visits may be barriers to women's consistent use of OCPs. AHRQ research shows that privately insured women pay, on average, 60 percent of the total expenditures for OCPs, which cost about $14 per monthly pack. Women who have no prescription drug coverage, are uninsured, or are privately insured but not in managed care plans have higher out-of-pocket expenditures for oral contraceptives.

Improving Screening for Chlamydia

An estimated 3 to 4 million cases of Chlamydia trachomatis are reported in the United States each year. Left untreated, chlamydia can lead to pelvic inflammatory disease, infertility, and ectopic pregnancy. More than three-quarters of the cases are asymptomatic, underscoring the importance of routine screening for sexually active adolescents and women aged 15 to 25.

AHRQ-funded research has led to a clinical practice improvement intervention to increase chlamydia screening among sexually active adolescent girls. A new, noninvasive urine-based chlamydia test is being used instead of traditional and often painful pelvic exams. The intervention is now in place at five pediatric clinics and is being disseminated to all pediatric clinics operated by Kaiser Permanente of Northern California.

Children's Health

Finding ways to improve outcomes, quality, and access to health care for America's 70 million children and adolescents is a critical goal of health services research and a continuing priority for AHRQ. 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.

For these and many other reasons, a special research focus is needed to increase understanding of the issues involved in improving the delivery of health care to children and adolescents. AHRQ has a commitment to build the infrastructure and capacity for child health services research and ensure that practitioners and policymakers have the knowledge and tools they need to:

- Improve child health outcomes.
- Enhance the quality of care children receive.
- Address access, use, and costs.
- Translate evidence-based research into improved clinical practice.

AHRQ's Children's Health Advisory Group (CHAG), under the leadership of the Agency's Senior Advisor for Child Health, is the principal source of policy advice and coordination of child health activities for the Agency as a whole. The purpose is to:

- Develop and promote the Agency's strategic plan for child health.
- Foster and support child health research, development of datasets and tools, and other child health activities in AHRQ Offices and Centers (O/Cs).
- Facilitate communication among the Senior Advisor, for Child Health and the O/Cs, as well as among the O/Cs, on child health issues.

AHRQ's Child Health Research Agenda

In 2004, AHRQ committed over $22 million of total support over the lives of the projects for new intramural and extramural research activities focused on child health, including grants, contracts, and interagency agreements. The goals of these projects are to support improvements in health outcomes, improve quality and patient safety, and identify strategies to improve access, foster appropriate use, and reduce unnecessary expenditures.

Examples of Ongoing Research

- Researchers at Children's Hospital in Los Angeles, CA are conducting a randomized controlled trial to assess the effects of preoperative gait analysis on surgical outcomes in ambulatory children with cerebral palsy. The study population includes a large number of Hispanic children and a small sample of African-American, Asian, and Native Hawaiian or other Pacific Islander children.
- Using a telehealth model, researchers at the University of Rochester in New York will evaluate children in schools and child care programs to examine the impact of telehealth on utilization and cost, continuity of care, adherence to well-child visit schedules, and immunization rates.

Childhood Obesity

In response to the growing epidemic of childhood obesity in this country, AHRQ developed two DVDs to teach children and their parents about smart eating and physical activity and to educate clinicians about the best ways to prevent and treat obesity in children. AHRQ partnered with FitTV, the newest network from Discovery Networks, U.S., to produce a fun and interactive DVD for children and their parents called *Max's Magical Delivery: Fit for Kids*.

The DVD is a 30-minute tool designed for families and children ages 5 to 9 to provide them with fun ways to incorporate physical activity and healthy foods into their daily lives. The DVD features healthy tips on small steps parents can take to make changes in the way their families eat and exercise every day. It includes a message from U.S. Surgeon General Richard Carmona, M.D., to kids about healthy eating. AHRQ is partnering with the American Academy of Pediatrics, the American Academy of Family Physicians, and other groups to distribute copies of the DVD to clinicians and encourage them to have their patients order additional copies.

A second DVD, *Childhood Obesity: Combating the Epidemic,* has been produced in partnership with Discovery Health Channel for pediatricians, family physicians, and other health care providers to help them learn new ways to assess and treat childhood overweight and obesity. This 55-minute program provides helpful clinical tools such as body mass index measurement in children, in addition to tips for initiating and sustaining behavior change in children. The program aired on the Discovery Health Channel September 26 through November 28, 2005. Free continuing education credits are available for children's health care providers, including nurse practitioners, through both the DVD version and the program on Discovery Health.

- Using a patient-centered health technology called ParentLink, researchers at Children's Hospital Corporation in Boston, will evaluate the completeness and accuracy of information provided by parents on symptoms, conditions, medications, and allergies compared with information documented by emergency department physicians and nurses. They also will assess ParentLink's impact on patient safety and quality.
- Researchers at Massachusetts General Hospital in Boston will assess changes in patient experience of care using a modified CAHPS® survey on the iimpact of medication dosing based on weight has on pediatric adverse drug events, a test result tracking system on appropriate followup of ordered tests, and automated reminders on symptom monitoring medications for children with asthma and attention deficit disorder.
- Investigators at the University of Tennessee Health Science Center will develop a database to include diagnosis, health record, and educational information on children with special health care needs.

Preventing Disability and Death Among Adolescents

As a result of AHRQ-funded research, Kaiser Permanente of Northern California developed guidelines aimed at preventing the leading cause of illness and death among adolescents. The AHRQ-funded research of Charles Irwin, M.D., of the University of California at San Francisco, helped shape the Kaiser guidelines.

Dr. Irwin developed an algorithm of key questions for pediatricians to ask adolescents that included tobacco use, bicycle helmet and seat belt use, and sexual habits. Customized screening and charting tools were also developed for pediatricians so they would have the questions at hand.

Preliminary data demonstrated that the three Kaiser clinics that took part in an intervention program were able to change adolescent behavior and improve health habits compared with the two clinics that were used as control groups. With these findings, Kaiser Permanente developed its own patient guidelines, which incorporated both the AHRQ research and the findings of their own clinicians.

- A research project at Yale University will implement and evaluate a community-wide electronic health record for use by clinicians in pediatric primary care, school health, specialty care, and emergency medicine who provide care for inner city children with asthma.
- Researchers at the University of Rochester Medical Center in New York will examine the prevalence of complementary and alternative medicine use among older adolescents, especially Hispanic adolescents.

Examples of Recent Findings

- Experienced pediatricians who relied on their clinical judgment more than existing clinical guidelines were able to minimize hospitalizations and avoid unnecessary lab testing for infants with fevers without a negative impact on the outcomes of care. The researchers found that clinicians followed clinical practice guidelines to treat infants with fevers 42 percent of the time. In the first month of life, 40 percent fewer infants were hospitalized when clinicians did not follow guidelines. Rather than hospitalization, the clinicians saw many infants in repeated office visits and had frequent telephone followup.
- Children who participated in the Federal Supplemental Nutrition Program for Women, Infants, and Children (WIC) for a full year were about 1.7 times as likely to have two or more dental visits per year, 1.5 times as likely to have one dental visit, and nearly 2 times more likely to have a preventative visit and a restorative visit as children who never participated in WIC. In addition, WIC participants were 32 percent less likely than non-participants to have an emergency visit related to oral problems.

Child Health Insurance Research Initiative (CHIRI™)

In 1999, AHRQ – in partnership with the David and Lucile Packard Foundation and the Health Resources and Services Administration – funded nine 3-year projects for more than $9 million to examine ways to improve health care for low-income children receiving care through publicly funded programs, including the State Children's Health Insurance Programs (SCHIP). The projects were dispersed around the country and focused on identifying which features work best for low-income, minority, and special needs children. Although seven of the nine grants ended in FY2003, the projects continue to produce useful information for policy makers.

Examples of recent findings from CHIRI™ projects include:

- SCHIP increased access to and satisfaction with health care among enrolled low-income children, according to a study of three state's SCHIP programs in three States (Florida, Kansas, and New York). The study showed that vulnerable children—minorities, children, and adolescents with special health care needs, and children uninsured for long periods of time—shared in these gains. It also highlighted areas to target for future improvement.
- Increases in SCHIP enrollment were associated with a decline in office-based physician participation in Medicaid in urban areas in Georgia, where the same provider network serves both Medicaid and SCHIP. However, increases in SCHIP enrollment had little effect on physician participation in Alabama, which uses an open health care provider panel. Researchers concluded that an adequate provider system is critical to assuring improvements in access to care for children enrolled in public insurance programs.

Characteristics of SCHIP Enrollees

The first collection of studies that report on the characteristics of children newly enrolled in the State Children's Health Insurance Program in multiple States is presented in a new AHRQ issue brief, and five articles and a commentary are presented in a special online supplement to the December 2004 issue of *Pediatrics*. States included in the studies were Alabama, Florida, Indiana, Kansas, and New York. Examples of findings include:

- Most SCHIP enrollees live in working families with incomes equal to or below 150 percent of the Federal poverty level, even though families are eligible for the program with incomes as high as 200 percent to 250 percent of the poverty level.
- A significant proportion of enrollees are black or Hispanic, and racial and ethnic disparities are present.
- Seventeen to 25 percent of enrollees are children with special health care needs, which is higher than the prevalence in the general population.

- Thirty-eight percent of children with special health care needs had a behavioral or mental health problem, but only 26 percent of caregivers perceived the need for treatment or counseling, according to an Indiana study. The researchers concluded that because caregivers do not always recognize behavior and mental health problems, children with special health care needs should be assessed for these problems during routine health care visits and referred to appropriate services.
- Recent findings from the CHIRI™ project in New York indicate that enrollment improved enrollees' access, continuity, and quality of health care. Enrollment in SCHIP:
  - Decreased the proportion of enrollees who did not have a usual source of care (from 14 percent to 3 percent).
  - Decreased the proportion of enrollees with any unmet health care needs (31 percent to 19 percent).
  - Reduced unmet need for specific types of care (specialty care, 16 percent), acute and preventive care (10 percent each), and dental and vision care (13 percent each).
  - Increased the proportion of children with a preventive visit (74 percent to 82 percent) with no significant changes in the number of emergency, specialty, and acute care visits.
  - Improved children's continuity of care: the proportion of children who used their usual source of care for most or all visits nearly doubled (from 47 percent to 89 percent).
  - Increased quality of care: families gave a higher rating to the benefits and medical care that they received after SCHIP enrollment compared with before enrollment.

Chapter 6. AHRQ Strategic Goals

Goal 1: Safety and Quality of Care

Patient Safety and Reducing Errors in Medicine

The 1999 Institute of Medicine report, *To Err is Human: Building a Safer Health System*, brought patient safety to the forefront of national attention. It changed the way the public sees this issue, and the statistics cited in the report – 44,000 to 98,000 deaths in hospitals each year due to medical error – remain the benchmark for judging the seriousness of the problem.

In November 2004, AHRQ joined the Kaiser Family Foundation and the Harvard School of Public Health to assess consumers' views on medical errors and patient safety. The findings made clear that consumers remain concerned about the problem of medical errors and do not believe that the Nation's quality of care is improving. In fact, four in ten people said that the quality of health care is now worse than in 1999; one in three people said that they or a family member had experienced a medical error. People with chronic health conditions were most likely to report problems in receiving care.

Many challenges exist in the area of patient safety research. First, adverse events that would be of interest to providers and researchers in determining how to make care safer are relatively rare. Thus, there isn't a large pool of these kinds of events to study. Further, in today's very complex, mulit-layered systems responsible for delivering care to patients, it is very difficult to isolate the key components in those systems that need to be changed. In addition, traditional clinical study techniques like randomized trials are hard to achieve, and in fact, these techniques beg the question of what type or level of evidence is needed to judge the effectiveness of patient safety interventions.

Since FY 2001, AHRQ has funded over 225 patient safety and related health information technology projects to help make health care services safer. These projects address four broad sets of tasks needed to achieve that goal:

- Identify medical errors and other threats to patient safety and understand why they occur.
- Advance the knowledge of practices that will effectively reduce or eliminate the occurrence of medical errors and minimize the risk of patient harm.
- Develop, assemble, and widely disseminate information on how to implement patient safety best-practices.
- Enable providers to continually monitor and evaluate threats to patient safety and the progress they are making.

Increasingly, AHRQ's projects have emphasized the development of skills needed to improve patient safety, development of practical tools to facilitate the use of what is now known, and collaboration with public- and private-sector groups to actually implement that knowledge.

Developing Skills to Implement Patient Safety Initiatives

AHRQ has created a Patient Safety Improvement Corps (PSIC), a training program that brings together teams of State officials and private-sector providers to learn and work together and undertake joint patient safety initiatives. The Department of Veterans Affairs has partnered with AHRQ in carrying out the training sessions. During 2004, teams from 20 States and the District of Columbia participated in the second PSIC class, joining teams from 15 States that participated in the inaugural 2003-2004 class. In recruiting for the third class, AHRQ is giving preference to applications from States that thus far have not participated.

Some teams have been successful in developing projects involving a large number of providers. For example, the Georgia team involved 28 hospitals and health systems across the State to develop and adopt strategies to ensure that the correct operative site has been verified before a surgical procedure is begun on a patient.

Another initiative with the Department of Defense (DoD) is built on the recognition that teamwork is a critical aspect of patient safety. Poor team coordination is a major cause of preventable patient harm. In 2004, the DoD and AHRQ began developing a public domain curriculum for training health care professionals to improve teamwork. This curriculum has undergone extensive field testing and will be made available to all health care institutions nationally in the fall of 2005. AHRQ and DoD will be working with CMS and the State Quality Improvement Organizations to set up a national training program in teamwork using the new curriculum. The curriculum will also be available on the AHRQ PSNet Web site (http://psnet.ahrq.gov/).

An important goal is to increase the skill level for analyzing patient safety threats at the hospital level. The most common approach in hospitals is known as Morbidity and Mortality, or M&M, conferences to assess what went wrong in cases where a patient is harmed. The Agency has built upon that approach with a popular Web site, known as the AHRQ Web M&M (http://www.webmm.ahrq.gov/) in which new cases are shared, along with expert commentaries on how to think through such cases, identify problem areas, and formulate potential solutions.

Each month a "spotlight" case is presented, accompanied by a slide set that health professionals can download and use as an educational tool in their own institutions. As a result of continued traffic on the site in 2004, more than 10,000 health care professionals are now ongoing registered users of Web M&M, and there were on average 28,000 visitors to the site each month in 2004. This approach is bringing lessons learned about patient injury and medical error outside the confines of

individual hospitals. Users include physicians, nurses, pharmacists, physician assistants, and other allied health professionals.

Communication with patients is an important skill, especially when an error has occurred. One of AHRQ's grantees, the Partnership for Health and Accountability (PHA), which comprises the Georgia Hospital Association (GHA) and Emory University, has developed a video, *Discussing Unanticipated Outcomes and Disclosing Medical Errors*, to assist providers with effective approaches for disclosing medical errors. The videotape was evaluated, refined, and distributed to all GHA members. Over two dozen workshops were held throughout Georgia to discuss the content of the video and to distribute a questionnaire to ascertain hospital disclosure practices. Distribution of the video is available at no cost through the PHA Web site (http://www.gha.org/pha/).

Developing Tools to Improve Patient Safety

In response to requests by State hospital associations, State data organizations, and others, AHRQ developed a set of indicators that any hospital can run against its hospital discharge data set to evaluate how it is doing in terms of safety and quality. The AHRQ Patient Safety Indicators (PSIs) are being used by a variety of hospitals and other organizations to screen for suspiciously high rates of potentially preventable complications from surgery and medical care, such as complications of anesthesia or postoperative infection.

Because AHRQ's PSIs allow for comparisons between hospitals, they are being used by a variety of organizations for public reporting and private- and public-sector pay-for-performance initiatives and demonstrations, in addition to internal hospital quality improvement. Many State and regional hospital associations, including the Georgia Hospital Association and the Dallas-Fort Worth Hospital Council, have integrated the AHRQ PSIs into their quality improvement programs. A number of Blue Cross plans are using the PSIs to align financial incentives with achievement of specific performance objectives, and some of the indicators are being used by CMS as part of their pay-for-performance demonstration.

Public- and private-sector organizations, such as Premier, Inc., have recognized the importance of measuring organizational conditions that can lead to adverse events and patient harm. To assist in that effort, in 2004 AHRQ collaborated with DoD and Premier, Inc., to develop another tool, the Hospital Survey on Patient Safety Culture. This public domain tool was released recently and is being rapidly adopted across the country. For example, Catholic Health Partners has 70 hospitals in their system. They have fielded the survey and, so far, have received about 3,000 responses. DoD anticipates using the survey in all of its facilities world-wide, and AHRQ has made the survey available on the Agency's patient safety Web site PSNet.

Voluntary Partnerships to Improve Patient Safety

The largest initiative, developed by the Institute for Health Improvement and cosponsored by AHRQ, CMS, and CDC, is the 100,000 Lives Campaign. This campaign was announced in December 2004 and has enlisted more than 2,200 hospitals to commit to implementing changes in care that have been proven to prevent avoidable deaths. The initiative is starting with six interventions: deployment of rapid response teams, delivery of evidence-based care for acute myocardial infarction, prevention of adverse drug events, prevention of central line infections, prevention of surgical site infections, and prevention of ventilator-associated pneumonia.

The goal is to save 100,000 lives annually that otherwise would have been lost without these changes in the delivery of care. In addition to saving lives, the benefits of preventing complications are significant. For example, patients on ventilators are very susceptible to pneumonia because it is easy for bacteria to get into the lungs. If they develop pneumonia, they are likely to spend an extra week in the hospital, and the extra cost of care can easily reach $40,000.

An AHRQ grantee at Johns Hopkins University is paving the way for success of the 100,000 Lives Campaign by working to prevent deaths resulting ventilator associated pneumonia and blood stream infections related to central lines. In 2004, the Hopkins team expanded its hospital partners and is now working with 127 Intensive Care Units (ICUs) in Michigan, 30 in New Jersey, 45 in Maryland, and recently expanded into Rhode Island. Michigan's experience suggests the significance of what can be accomplished. An Associated Press story about the project noted that Michigan hospital officials estimated that they had saved 77 patients' lives: 73 from pneumonia and 4 from blood infections. In addition, a small number of ICUs have actually gone as long as 9 months without one of these two complications. This project has developed implementation tool kits to assist other hospitals in putting these safety improvements into practice.

Using Health Information Technology to Improve Patient Safety

Health information technology (health IT) has been recognized, from the start, as an important part of AHRQ's patient safety agenda. Inadequate information is often a root cause of medical errors. And by contrast, information systems that not only make patient information available, but also support decision-making – like "smart" drug ordering systems—can have a sizeable impact on improving the safety of care.

To help promote the use of health IT to improve patient safety, in 2004 AHRQ announced $139 million in grants and contracts to speed the adoption of a variety of health IT innovations.

In particular, the awards are intended to provide insight into how best to use health IT to reduce medication errors and thereby improve patient safety; increase the use of shared health information between providers, laboratories, pharmacies, and patients; to ensure safer patient transitions between health care settings, including hospitals, doctors' offices, and nursing homes; and reduce duplicative and unnecessary testing.

The $139 million investment in health IT was allocated in the following ways:

- **Promoting access to health IT.** Over 100 grants were awarded to communities, hospitals, providers, and health care systems to help in all phases of the development and use of health IT. The grants are spread across 38 States, with a special focus on small and rural hospitals and communities. First-year funding is $41 million and will total nearly $96 million over 3 years.
- **Developing Statewide and regional networks.** Contracts were awarded to five States or their designees to help them develop State-wide networks that are secure, have safeguards to ensure privacy of health information, and make an individuals' health information more available to health care providers. These 5-year contracts are for projects in Colorado, Indiana, Rhode Island, Tennessee, and Utah. Participants include major purchasers of health care, public and private payers, hospitals, ambulatory care facilities, home health care providers, and long-term care providers. First-year funding is $1 million for each State and will total $25 million over the course of the contracts.
- **Encouraging adoption of health IT by sharing knowledge.** This project supports the creation of the National Health Information Technology Resource Center. The Center will aid grantees and other Federal partners by providing technical assistance, and a focus for collaboration, serving as a repository for best practices, and disseminating needed tools to help providers explore the adoption and use of health IT to improve patient safety and quality of care. The 2-year contract was awarded to NORC, a national organization for research at the University of Chicago. First-year funding is $4 million, with an estimated value of $18.5 million over the course of the contract, which can be renewed for up to 3 years.

Recent Findings on Patient Safety

An AHRQ-funded study used the PSIs to focus on children in hospitals. The researchers examined 5.7 million hospital discharge records for children under age 19 from 27 States, drawn from the 2000 Healthcare Cost and Utilization Project State Inpatient Database. This is one of the first studies to quantify the impact of patient safety events on children in terms of excess hospital stays and charges, as well as the increased risk of death among children due to medical errors. The researchers found:

- There were 51,615 patient safety events involving children in hospitals during 2000. Children up to 1 year old were consistently and significantly more likely to experience many of the events identified by the PSIs than older children, and

children whose primary insurance was Medicaid also were more likely to experience several of the PSI events.

- The prevalence of patient safety events resulting in injuries among children also had an impact on the length of stay, charges and the rate of in-hospital deaths. For example, infections resulting from medical care caused a 30-day increase in the average length of stay and resulted in average increased charges of over $121,000 per discharge.
- In total, the combined excess charges for all PSI events are estimated to have exceeded $1 billion. Postoperative respiratory failure increased the rate of deaths in hospitals by as much as 76 percent. The researchers estimate that if all deaths among pediatric patients who experience a medical injury are attributed to those injuries, then the records in their analysis alone account for 4,483 deaths among hospitalized children in the year 2000.

Ongoing Research in Patient Safety

- **Improving Primary Care Patient Safety with Handheld DSS.** The purpose of this project is to investigate the use of computer-based decision support systems (DSS) as a solution for improving prescribing patterns and improving patient safety. Researchers will: (1) implement DSS designed to reduce medical errors; (2) minimize barriers to maximize the probability that the systems will be used; (3) systematically assess the extent to which potential or perceived barriers actually influence DSS use; and, most importantly, (4) assess the impact of DSS on patient safety, targeting prevention of the risks of inappropriate prescribing of medications.
- **Improving Medication Safety Across Clinical Settings.** Researchers are investigating novel approaches to reporting of errors and adverse events involving inpatients, outpatients, and nursing home patients, as well as pediatric, adult, psychiatric, and frail elder groups. Researchers are testing information technology, engineering, and human factor approaches to preventing errors including: (1) augmented reporting of and learning from all medical errors by moving from local to system-wide error reporting; (2) expanded epidemiological knowledge of medication errors in vulnerable patient groups, including the ambulatory pediatric and inpatient psychiatric settings; (3) development and validation of a tool to rapidly assess the culture of an organization and its attitudes regarding error; and (4) evaluation of novel medication safety interventions.
- **Accountability and Health Safety—A State-wide Approach.** The purpose of this research project is to evaluate the effectiveness of a state-wide, voluntary, peer review protected, medical error reporting system for hospitals in Georgia. Researchers will use data on errors from the State-wide reporting system, and hospital-level data from a variety of demonstration site hospitals to: (1) examine the effectiveness of the voluntary reporting system in reducing errors; (2) test

modifications to make the reporting system more efficient and less burdensome for reporters; and (3) develop estimates of the financial costs of medical errors in community-based hospitals. Additionally, organizational policy experts will collect qualitative data from health care professionals to assess the usefulness of feedback reports generated by the Statewide reporting system, identify barriers to and incentives for reporting errors and implementing recommended interventions, and determine how these relate to the creation of an organizational culture of safety.

Future Steps

Significant progress has been made since the IOM highlighted the importance of patient safety and the vigorous response by the U.S. Congress and agencies like AHRQ. However, as consumers, themselves, reflected in the AHRQ/Kaiser Family Foundation/Harvard survey, there is still a long way to go.

First, a culture of safety is critical on two levels. Health care professionals need to feel safe to honestly acknowledge errors or "near misses" within the institutions in which they practice. Institutions also need to feel safe to seek help in identifying and resolving organizational and system-based threats to patient safety without retribution.

Second, as a culture of safety develops within an individual institution, it is important to recognize that the number of "reported" errors is likely to rise as previously hidden errors are disclosed. For this reason, an initial rise in the number of reported errors is a sign of success, not failure.

Third, while an increasing number of hospitals are developing the capacity to analyze the causes of medical errors, the ability to conduct these analyses is uneven, both in terms of experience and skill level. One of AHRQ's State Patient Safety Improvement Corps teams determined that, after excluding a large hospital with a proactive patient safety program, most hospitals in their State completed only four root cause analyses per year. State teams that focused on the skills needed to undertake such analyses found that the need for better skill development was significant. Moreover, few institutions have any experience with other pro-active risk assessment methods. Moving to a system in which hospitals routinely undertake analyses of the causes of errors will require significant skill development and technical assistance.

Fourth, knowing the right thing to do to improve the quality and safety of patient care is only the first step. To increase the pace of improvement, the emphasis on implementation research, step-by-step guidance on implementation, and tools to facilitate the use of effective interventions are critical. AHRQ has already begun shifting emphasis within its existing resources to move in this direction.

Fifth, there is a significant amount of information on how to improve the safety of hospital care, but the evidence base is less robust for other settings of care.

Finally, AHRQ will seek ways to make effective use of voluntary collaboratives that bring together health care organizations at different stages of development in the application of effective health care interventions. Collaboratives provide a natural setting for shared learning which accelerates the pace of improvement and innovation. By providing an opportunity to learn from the experiences of organizations at the cutting edge, the health care system can eliminate the inherent delays that occur while each institution reinvents the wheel. This approach also enables AHRQ to better focus its technical assistance and short-term implementation research.

Making Quality Count

Quality health care means doing the right thing, at the right time, in the right way, for the right person, and ultimately, achieving the best possible results. 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, and 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 their care and needlessly increase costs. At other times they do not receive needed services that have been proven to be effective. For example, one AHRQ-funded study found that older patients of high-volume surgeons had lower death rates for some cardiac and cancer surgeries than patients whose surgeons performed these operations less frequently.

There is great potential to improve the quality of health care provided in the United States, and AHRQ is committed to this goal. We are working to maintain what is good about the existing health care system while paying special attention to 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.

Recent Findings on Health Care Quality

- Hypertension and its related problems were draining South Carolina of about $9 billion a year in direct medical costs and indirect costs such as lost productivity. To reduce this burden, the State began a Hypertension Initiative in April 1999 to provide feedback and cardiovascular risk management advice to primary care

providers and train hypertension specialists. By monitoring prescribing patterns through a data feedback program, providing evidence-based management approaches through continuing medical education seminars, and applying improved treatment protocols, physicians can have a profound impact on hypertension. According to an update on the program, the initiative has educated over 400 doctors throughout the State on management of hypertension, lipid disorders, and diabetes via a series of continuing medical education programs. Finally, the State has certified 63 hypertension specialists in South Carolina.

- A study of elderly Mexican Americans with diabetes found that one-third (36 percent) inconsistently used their prescribed diabetic medications, and those who were inconsistent in their medication use were more likely to develop kidney problems or die over a 7-year period. Patients who did not have Medicaid or private/HMO health insurance and those who were age 75 or older were much more likely to be inconsistent with treatment. Patients with inconsistent use of medication were more likely than consistent users to report kidney problems. Inconsistent use of medication also increased the risk of death from any cause by 43 percent and diabetes-related deaths by 66 percent over a period of 7 years.
- Few donor kidneys are available for transplantation in patients with kidney failure, also called end-stage renal disease (ESRD). Thus, most of these patients must choose between hemodialysis and peritoneal dialysis, procedures that remove toxins or wastes from the blood that the failed kidney can no longer remove. Patients who undergo hemodialysis usually must go to an outpatient dialysis facility three times a week for 3 to 4 hours each time. There, trained nurses and technicians carry out the prescribed treatment using a dialysis machine. In contrast, peritoneal dialysis is most commonly performed every day at home by the patient after he or she is trained by dialysis facility staff. Peritoneal dialysis can even be done at night while the patient is asleep. Patients receiving peritoneal dialysis were much more likely than those receiving hemodialysis to give excellent ratings of dialysis care overall (85 vs. 56 percent), and they were significantly more likely to give excellent ratings for each specific aspect of care rated.
- Diabetes is the cause of 45 percent of ESRD cases, and a recent study shows that about half of patients in high-risk clinical groups are not receiving angiotensin-converting enzyme (ACE) inhibitors or angiotensin receptor blockers (ARBs) to slow the progression of diabetes to kidney failure. The majority of patients (61 percent) received indicated ACE inhibitor or ARB therapy in 2000. An ACE inhibitor or ARB was dispensed to 74 percent of patients with both hypertension and albuminuria, but this treatment was dispensed to only 64 percent of those with hypertension alone and 54 percent of those with albuminuria alone. An ACE inhibitor or ARB was dispensed to 61 percent of whites, 63 percent of blacks, 59 percent of Latinos, and 60 percent of Asians. Among those with albuminuria alone, blacks were significantly less likely than whites to receive either medication (47 vs. 56 percent).

- More effective and convenient antiosteoporosis medications (AOMs) boosted patient visits to the doctor for osteoporosis four-fold between 1994 (1.3 million visits) and 2003 (6.3 million visits). In addition, the proportion of visits in which AOMs were prescribed increased 15 percent from 1988 (82 percent) to 2003 (97 percent). In 1988, bisphosphonates (Fosamax®) were prescribed in 1 percent of osteoporosis visits, but by 2003, they were prescribed during 73 percent of visits. This suggests that doctors rapidly adopted use of the new medications to treat osteoporosis.

Research in Progress on Health Care Quality

- **Access to Pediatric Subspecialty Care in the USA.** Researchers for this project will: 1) investigate and depict the practice location of pediatric and adult subspecialists; 2) explore the relationship between county characteristics and access to pediatric subspecialty care; 3) ascertain the extent to which adult subspecialists expand access to care for children with rheumatic diseases; 4) describe the practice patterns of subspecialists, their comfort with treating a variety of pediatric conditions, and the practice, provider, and market characteristics that influence their decisions to treat pediatric patients; and 5) determine the independent effects of selected training, personal, and practice characteristics on the likelihood that an adult subspecialist treats pediatric patients.
- **National Trends in Outpatient Quality Indicators.** Researchers for this project will: (1) construct a set of outpatient quality indicators; (2) assess quality of care at the national level using the selected indicators; (3) evaluate time trends in these indicators; and (4) determine patient, physician, and organizational predictors of quality of care, with a particular focus on racial/ethnic minorities. A set of 27 proposed quality indicators will provide a quantitative assessment of quality and will cover recommended medications, antibiotic use, physician counseling/disease management, diagnostic testing, and medication errors.

Tools for Patients and Health Care Consumers

As part of AHRQ's commitment to enhancing the quality of health care for all Americans, the Agency has played a major role in developing, refining, and disseminating quality measures and related resources. These research-based tools serve two purposes. First they provide consumers with the reliable, evidence-based information they need to choose wisely among health plans, practitioners, and facilities and get the health care that is best for them. Second, they offer providers the validated, comparative data they need to assess strengths and weaknesses in their performance.

CAHPS® (http://www.ahrq.gov/qual/cahpsix.htm)

The CAHPS® (formerly the Consumer Assessment of Health Plans) initiative, begun in October 1995, has become the industry standard for obtaining input from consumers about their health plans. 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, providers, hospitals, and other health facilities. CAHPS® also allows health plans and purchasers to assess and track areas for quality improvement. The overall goal of CAHPS® is to provide an integrated set of carefully tested and standardized survey questionnaires and accompanying report formats that can be used to collect and report meaningful and reliable information from health plan enrollees about their experiences. These materials have been designed for use with all types of health insurance enrollees (Medicaid and Medicare beneficiaries as well as the privately insured) and across the full range of health care delivery systems, from fee-for-service to managed care plans. In addition to a core set of items designed for use with all respondents, some additional questions are targeted for use with certain subgroups such as people with chronic conditions or disabilities, Medicaid and Medicare beneficiaries, and families with children. The information from CAHPS® questionnaires and reports can help consumers and group purchasers compare health plans and make more informed choices.

The CAHPS® II project focuses on further development of surveys for different health care settings and populations, strategies for quality improvement using patient survey data, and testing of new and more effective ways to report quality data to consumers, patients, caregivers, and purchasers. It will also permit translation of the questionnaires and reports into Spanish and other languages.

Other CAHPS Projects

Hospital CAHPS® (HCAHPS). Begun in July 2002, HCAHPS has been developed under a collaborative process sponsored by AHRQ and CMS. It has grown out of a need to assess the experiences of hospital patients and will be implemented nationwide by CMS on a voluntary basis in summer 2005. It is expected that once the survey results are available, they will be included as part of a larger effort already in place where hospitals voluntarily publicly report the results of their performance on 10 quality measures for three medical conditions—acute myocardial infarction, heart failure, and pneumonia.

Ambulatory CAHPS® (ACAHPS). ACAHPS will provide users with a flexible, modular approach to assessing the quality of ambulatory care at different levels of the health care system, including the individual clinician, group practice, and health plan levels. With ACAHPS, users will be able to assess patients' perceptions of care for access, doctor communication, office staff courtesy, helpfulness and respect, shared decisionmaking, coordination/integration, health promotion and education, and customer service.

Nursing Home CAHPS® (NH CAHPS). Jointly sponsored by CMS and AHRQ, this effort supports the development of separate surveys for residents and their families. The survey for residents includes questions about the care they receive in the facility and their quality of life and covers such areas as staff communication, staff helpfulness, and ability to get needed care. The family survey covers communication, staff behavior, facility environment, and care of the resident. It is expected that the resident survey will be used nationwide by CMS in late fall of 2005; CMS plans are still in development for use of the family survey.

In-Center Hemodialysis CAHPS® (ICH CAHPS). As the primary payer for care delivered to patients with end-stage renal disease, CMS has devoted significant resources to gathering and reporting on clinical measures that dialysis facilities and patients can use to monitor and improve the quality of care. CMS requested that AHRQ develop a patient survey to supplement these clinical measures, focusing on hemodialysis patients who receive their care in dialysis facilities. The ICH CAHPS survey represents the first CAHPS® survey to focus exclusively on a very sick and dependent population of patients with chronic illness. Among other topics, it assesses communication with the urologist and dialysis center staff, the facility environment, involvement in care, patient education, and complaints. It is expected that CMS will implement the survey sometime in 2006.

The CAHPS® surveys help create consumer demand for quality improvement:

- Research has shown that when consumers have to change health plans, they use CAHPS information for their choice.
- An estimated 130 million Americans are enrolled in health plans that have CAHPS information: Medicare/Medicaid, Department of Defense Tricare, Federal Government employees, and private insurance plans.
- There is evidence that public reporting of data is incentive for providers to conduct quality improvement.
- CAHPS® is a standard survey and can be used to compare scores between insurers.
- In using HCAHPS and ACAHPS, consumers will be able to compare scores for services received from health care providers and use that information in making decisions about choosing providers and services.

Quality Tools for Clinicians and Purchasers

National Quality Measures Clearinghouse™

The National Quality Measures Clearinghouse™ (NQMC) is a database and Web site for information on specific evidence-based health care quality measures and measure sets. NQMC is sponsored by AHRQ to promote widespread access to quality measures by the health care community and other interested individuals. The NQMC mission is to provide practitioners, health care providers, health plans, integrated delivery

systems, purchasers, and others an accessible mechanism for obtaining detailed information on quality measures and to further the dissemination, implementation, and use of mesures to inform health care decisions.

In order to be included in the NQMC, measures must satisfy the NQMC inclusion criteria. The NQMC inclusion criteria are available online at http://www.qualitymeasures.ahrq.gov/about/inclusion.aspx.

A brief description of the criteria is as follows:

- The measure(s) must address some aspect of health care quality and relate to one of four domains: access, process, patient experience, or outcome.
- English-language documentation of the measure rationale, numerator, denominator, and data source must be provided.
- Documentation of supporting evidence appropriate for the measure domain must be provided.
- The measure(s) must have been cited in one or more reports in a National Library of Medicine indexed, peer-reviewed journal, applying or evaluating the measure's properties; or the submitter must provide documented peer-reviewed evidence evaluating the reliability and validity of the measure; or the measure must have been developed, adopted, adapted, or endorsed by an organization that promotes rigorous development and use of clinical performance measures.
- The measure(s) must be in current use or currently in widespread testing and must be the most recent version if the measure has been revised.

Measures can be submitted to NQMC on an ongoing basis. Measures are submitted 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.

In 2004, AHRQ released NQMC tutorials on CD-ROM including a series of informative demonstrations and scenarios on using the NQMC. A new detailed search was also implemented on the NQMC Web site. This

NQMC Used By Wisconsin's Managed Care Program

Wisconsin's State Medicaid managed care program utilizes the AHRQ National Quality Measures Clearinghouse (NQMC) in updating and adding to its quality performance measures. The program consists of 13 HMOs and includes Medicaid and BadgerCare enrollees in Wisconsin. BadgerCare is the State Children's Health Insurance Program (SCHIP).

Although development of the State's MEDDIC-MS (Medicaid Encounter Data Driven Improvement Core Measure Set) managed care performance measures predates the availability of NQMC, the State of Wisconsin found it to be a valuable resource to its ongoing quality assessment and performance improvement program, to include possible new topics, data sources, and technical specifications.

feature allows users to filter searches by measures included in the *National Healthcare Quality Report* and/or the *National Healthcare Disparities Report.*

QualityTools™

The QualityTools™ Web page (www.qualitytools.ahrq.gov/) is a clearinghouse for practical, ready-to-use tools for measuring and improving the quality of health care. Links are provided for health care providers, policymakers, patients and consumers, and payers and purchasers.

Provider page: offers resources to help physicians, hospitals, health systems, and other provider organizations, including guidelines, measures, benchmarking and comparative data, and information on patient safety.

Policymakers page: offers resources to help national, regional, State, or local decisionmakers including guidelines, measures, benchmarking and comparative data, and information on patient safety.

Patients and consumers page: offers resources to help individuals with their health care needs including information on specific diseases and conditions, recommendations for choosing health care services, and tips for staying healthy.

Payers and purchasers page: offers resources to help health plans, administrators, and employer groups, including guidelines, measures, benchmarking and comparative data, and information on patient safety.

Goal 2: Efficiency

AHRQ strives to help Americans achieve wider access to effective health care services and reduce health care costs by developing strategies to improve access and foster appropriate use of health care services. The goal is for the services provided to be of the highest quality, with the best possible outcomes, at the lowest possible cost. AHRQ directs many of its activities toward improving efficiency through the design of systems that assure safe and effective treatment and reduce waste and cost.

According to the most recent data from the MEPS, health care costs continue to escalate. Total expenditures for health care services in 2002 were $810 billion compared with $726 billion in 2001—an increase of 11.6 percent. Health insurance premiums are also increasing. In 2002, the average annual total premium for single coverage was $3,189, a 10.4 percent increase over 2001. Family coverage averaged $8,469 in 2002, a 12.8 percent increase over 2001.

Given the increasing costs of health care, it is vitally important for us to find ways to become more efficient and effective in providing high-quality health care. AHRQ research is at the forefront of this effort to improve health care efficiency and effectiveness. For example:

- Hospitalists—physicians who usually care for patients only while they are hospitalized—tend to be more efficient than other physicians in providing

inpatient care to general medical patients, and general internists appear to be more efficient than endocrinologists and rheumatologists. Such efficiency translates to shorter hospital stays and lower costs. Total costs for patients cared for by general internists were $1,100 lower than for patients treated by endocrinologists and $431 lower than for patients cared for by rheumatologists.

- While the use of muscle relaxants is very common among patients suffering from acute low back pain, they do not appear to speed recovery of function. Patients who used muscle relaxants took 19 percent longer to reach functional recovery as those who did not. Slower functional recovery among those taking muscle relaxants could be related directly to the medications, or it could be due to factors indirectly related to muscle relaxant use, such as greater time spent in bed after the injury.
- Trauma centers can reduce posttraumatic stress disorder (PTSD) symptoms and alcohol abuse/dependence among patients by using a trauma support specialist to coordinate care in a collaborative care (CC) approach that includes case management, medication, and psychotherapy. The CC patients received stepped care that consisted of continuous post-injury case management tailored to the needs of the individual trauma survivor, motivational interviews targeting alcohol abuse/dependence, and evidence-based medication and/or cognitive behavioral therapy for patients with persistent PTSD at 3 months after injury. Over time, CC patients had significantly fewer symptoms than patients receiving usual care with regard to alcohol abuse/dependence. Patients in the CC group demonstrated no changes in PTSD from baseline to 12 months, but patients in the usual care group had a 6 percent increase in PTSD during the year. The CC group showed on average a 24 percent decrease in the rate of alcohol abuse/dependence, while the usual care group had on average a 13 percent increase during the year.
- The incidence of diabetes is increasing among adults 30 to 59 years of age in the United States. Compared with older people who have diabetes, these younger diabetes patients are substantially less likely to receive important preventive care services such as eye and foot exams. Young adults have a greater lifetime risk of developing complications of diabetes such as eye and kidney disease and circulatory problems that can lead to amputation. An AHRQ-funded study showed that 85 percent of young adults had seen a health care provider for diabetes in the past year. Yet, except for professional foot examinations (to detect nonhealing wounds that can lead to infection, gangrene, and amputation) and testing of blood sugar levels, young (18 to 44 years) and middle-aged (45 to 64 years) patients received fewer preventive services than older patients.

Addressing Challenges to Care

The combination of rapid advances in medical knowledge and increased use of evidence-based decisionmaking in medicine holds great promise for improving health care. Developments in genomics, pharmaceuticals, informatics, and other

technologies promise increased longevity and better health and functioning. Health care, however, can only be as good as the systems that provide it.

Much of the health care provided in the United States is delivered within large and often fragmented systems with complex funding streams. Although the United States has an excellent health care system in many ways, it also exhibits waste and inefficiency which in turn exacerbates health care costs, affects affordability, and creates access problems. Low income individuals from both rural and urban areas and those who lack health insurance are particularly likely to experience these problems. For example, one AHRQ-funded study found that Medicare patients who have supplemental private insurance and are hospitalized for heart attack are more likely than patients with Medicare only or Medicare and public insurance to undergo revascularization (bypass surgery or coronary angioplasty). Patients with Medicare plus supplemental private insurance coverage were 69 percent more likely than those with Medicare only insurance to undergo coronary angioplasty and 53 percent more likely to undergo bypass surgery. They were also 23 percent less likely to die in the hospital.

In this complex and sometimes confusing health care marketplace, all participants in the health care system—employers, insurers, providers, consumers, and 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 many years, AHRQ has been supporting research to meet this need. The Agency addresses critical health policy issues through ongoing development and updating of nationally representative databases, the production of public use data products, and research analyses conducted by AHRQ staff and extramural researchers.

Improving Access to Care

Identifying ways to improve access to care—particularly for low-income individuals, minorities, and other priority populations—has been a major focus for AHRQ research for many decades. Findings from AHRQ-supported research on access to care include:

- Many States try to entice young generalist physicians into rural and medically underserved areas with financial support-for-service programs. These programs provide financial support such as scholarships, service-option loans, loan repayment, direct financial incentives, and resident support programs to medical students, residents, and practicing physicians in exchange for a period of service in underserved areas. One study found that the programs as a whole placed physicians in small and needy rural towns and counties, where physicians estimated that nearly half of their patients were insured by State Medicaid programs for the poor or were without health insurance. Compared with other young, nonobligated generalist physicians, those serving obligations to State programs practiced in demonstrably needier areas and cared for more Medicaid and uninsured patients (48.5 vs. 28.5 percent). On the other hand, State-obligated

physicians were more satisfied than nonobligated physicians, and 9 out of 10 indicated that they would enroll in their programs again. Obligated physicians also remained longer in their practices than nonobligated physicians, with respective group retention rates of 71 percent versus 61 percent at 4 years and 55 versus 52 percent at 8 years. Retention rates were highest for loan repayment, direct incentive, and service-option loan programs.

- Beginning in 1990, California's Medicaid program, MediCal, expanded prenatal care coverage to more low-income women. The result was a substantial reduction in inadequate use of prenatal care. The proportion of live-born infants whose mothers had inadequate prenatal care (first physician visit after the fourth month of pregnancy) decreased from 20 percent in 1990 to 14 percent in 1995 and 12 percent in 1998. Also, the proportion of pregnant women who had no insurance or were self-paying fell from 13.1 percent in 1990 to 4.2 percent in 1995 and 3.6 percent in 1998. These improvements could be attributable to easier enrollment (due to a shortened application form) and expanded eligibility, which enabled more newly enrolled pregnant women to initiate prenatal care within the first trimester.
- Medicare bases its payments on the diagnosis-related group (DRG) that correlates with a patient's discharge diagnosis. An AHRQ-funded study showed that hospital costs in one hospital were 23 percent higher for elderly Medicare patients with low functional status, even after adjustment for DRG payments and patient characteristics. If this finding holds true in other hospitals, DRG-based payments provide hospitals a financial incentive to avoid patients dependent in activities of daily living (ADLs, for example, dressing, bathing, or transferring from bed to

Researchers Examine Access To Physicians

HMOs usually limit the size of their physician networks. This has raised concerns that individuals who switch health plans or jobs (which usually involves changing health plans) may have to leave preferred physicians. However, a recent AHRQ-funded study found that people who switch HMOs have a reasonable likelihood (50 percent chance) of being able to retain their physician.

The researchers used data from electronic HMO provider lists of more than 500,000 physicians and 6,000 hospitals to quantify the extent of provider overlap (the probability that a physician in any given plan is also in a competing plan) in U.S. metropolitan markets. The national measure of overlap is 0.48, indicating that the probability that a given HMO enrollee's physician is also in a competing HMO is 48 percent, or about half.

Overlap varies with both plan and market attributes. Group/staff-model plans have virtually no overlap, since their providers are all part of the health plan staff. Other plan types have high levels of overlap, while younger plans, for-profit plans, and plans in small markets also have greater overlap.

chair). DRG-based payments also disadvantage hospitals with more ADL-dependent patients, whose care costs are higher than their diagnosis alone would indicate. Hospital costs were higher in patients dependent in ADLs on admission than in patients independent in ADLS on admission ($5,300 vs. $4,060). Mean hospital costs remained higher in ADL-dependent patients than in ADL-independent patients in an analysis that adjusted for DRG ($5,240 vs. $4,140) and in multivariate analyses adjusting for age, race, sex, clinical factors, and admission from a nursing home, as well as for DRG ($5,200 vs. $4,220).

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

How services are organized and financed has a significant impact on the services an individual receives. In order to be successful, efforts to improve the quality and efficiency of health care in the United States must be based on a thorough understanding of how the Nation's health systems work and how different organizational and financial arrangements affect health care. AHRQ has a broad portfolio of research focused on identifying the impact that costs have on the quality of health care and outcomes, as well as ways to lower health care costs without negatively affecting the quality and safety of care. Recent findings from AHRQ-funded studies on cost, quality, and equity include:

- One study provides preliminary support for efforts by health maintenance organizations (HMOs) and State legislators to cover home testing equipment such as blood glucose monitors and test strips for patients with type 1 and type 2 diabetes. According to the study findings, when an HMO provided free blood glucose monitors (at a cost of up to $100 each) to people with diabetes, more patients self-monitored their blood glucose (SMBG) which, in turn, increased regular use of diabetes medications and reduced high blood glucose levels.

Increasing Access To Physicians In Underserved Areas

AHRQ-supported research influenced the Mississippi State Legislature to offer and later improve programs to attract health care professionals to medically underserved areas. The research was used to demonstrate to State legislators that if they included a loan repayment program in their legislation, they would be more successful in both service participation and completion rates. The bill that was passed and became law in 2001 included a loan repayment program for doctors, dentists, and nurse practitioners. Prior to that, the law only covered scholarships. In addition, in 2003, the requirement for years of service was lowered for each program to make them more in line with those offered in other States. The bill was passed by the full legislature in 2003 and the minimum service requirement for the scholarship program was reduced from 10 to 6 years and for the loan repayment program from 8 to 6 years. The loan repayment reform also provides participating physicians and dentists with the option to receive additional loan repayment credits for an additional 4 years and nurse practitioners with the option to receive an award for 3 additional years.

Compared with rates 2 years before policy initiation, SMBG rates 2 years afterwards showed a significant increase in SMBG among insulin-treated patients. Test strip use increased 75 percent during the first 6 months after the policy began. Those who increased test-strip use showed significant improvements in using medication regularly 6 months after initiation.

- When employers switch from a one-tier prescription drug plan that has the same copayment for all drugs to a three-tier plan that has a much higher copayment for nonpreferred brand-name prescription drugs, a substantial number of enrollees may stop taking their medications instead of switching to less expensive medications. In three-tiered drug benefit plans, copayments increasingly escalate for generic (tier-1), preferred brand name (tier-2), and nonpreferred brand name (tier-3) drugs. In this study, more members who initially were taking tier-3 statins to lower cholesterol than those in the comparison group switched to lower-cost tier-1 or tier-2 medications (49 percent vs. 17 percent), but more of them also stopped taking statins entirely (21 vs. 11 percent).
- Another AHRQ-funded study indicates that increasing patients' copayments for prescription medications tends to decrease their use of eight classes of therapeutic drugs. In the study, doubling copayments in a typical two-tier drug plan resulted in an approximately 45 percent reduction in the use of antiinflammatory drugs and antihistamines, a drop of approximately 35 percent in the use of cholesterol-lowering medications and drugs to treat ulcers and asthma, and a decrease of about 25 percent in the use of medicines for high blood pressure, depression, and diabetes.

Use of academic detailing to lower medication costs

AHRQ-supported research helped to establish the importance of academic detailing, a way of working with physicians to help control drug costs using educational programs. Influenced by this research, AdvancePCS, the Nation's largest provider of health improvement services, developed pharmacy benefit management tools that saved its health plans $1.62 billion, with per-member-per-month costs increasing only 4.5 percent, significantly lower than the 17 percent national average reported by the National Institute for Health Care Management. Today, it has a nationwide clinical consulting program with 150 licensed pharmacists contacting 20,000 physicians annually. The pharmacists meet with doctors in face-to-face interventions, send direct mail and faxes, and use telephone calls to enhance doctors' prescribing knowledge while increasing their formulary compliance. One of AdvancePCS's preferred provider organizations increased its savings by 22 percent after AdvancePCS implemented similar utilization and formulary management programs. The company also completed a study of the savings impact from the clinical consulting program. The analysis demonstrated that face-to-face physician education generated more than $300,000 in direct drug cost savings for a single client across two therapeutic classes.

- Perceived copayments for emergency department (ED) care can lead some patients to delay or avoid emergency care. Over half (57 percent) of those surveyed underestimated their ED copayment by $20 or more. One-fifth (20 percent) of adults who thought their copayment was $20 or higher said they had delayed or avoided emergency care compared with only 6 percent who thought their copayment was less than $20. Among patients who reported having any ED copayment, 11 percent said they either delayed or avoided emergency care.

Medical Expenditure Panel Survey

AHRQ's Medical Expenditure Panel Survey is the only national source of annual data on the specific health services that Americans use, how frequently the services are used, the cost of the services, and the methods of paying for those services. In addition to collecting detailed information from American households, MEPS also collects data from medical providers and establishments. As a result, the survey is unparalleled in its degree of detail.

MEPS is designed to help us understand how the growth of managed care, changes in private health insurance, and other dynamics of today's market-driven health care delivery system have affected, and are likely to affect, the kinds, amounts, and costs of health care that Americans use. MEPS provides the foundation for estimating the impact of changes on different economic groups or special populations such as the poor, elderly, veterans, the uninsured, or racial/ethnic groups.

Since 1977, when data from the first expenditure survey became available, AHRQ's expenditure surveys have been an important and unique resource for public and private-sector decisionmakers. Over the years, this rich data source has become more comprehensive and timely. Design enhancements have improved the survey's analytic capacities, allowing for analyses over an extended period of time with greater statistical power and efficiency. The ability of MEPS to examine differences in the cost, quality, and access to care for minorities, ethnic groups, and low-income individuals provided critical data for the National Healthcare Quality Report and the National Healthcare Disparities Report, which present baseline views of the quality of health care and differences in use of services.

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 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 have quickly become a linchpin for the Nation's economic models and projections of health care expenditures and use. The level of detail these surveys supply 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.

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) Decrease the cost per year of data collected. (2) Provides more timely data on a continuous basis. (3) Creates for the first time the ability to assess changes over time. (4) Permits the correlation of these data with the national health accounts, which measure spending for health care in the United States by type of service delivered (e.g., hospital care, physician services, nursing home care, and other types of care) and source of funding for those services (private health insurance, Medicare, Medicaid, out-of-pocket spending, and so on).

Public Use Data Files and Other MEPS Products

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

- Data files. MEPS data populate a number of analytical databases. Several public use data files that facilitate national estimates of expenditures for health care services are released annually.
- Printed data. AHRQ publishes MEPS data in tabular form on a range of topics. Printed publications include methodology reports, findings, statistical briefs, and chartbooks.
- Web site. AHRQ maintains a Web site specific to MEPS at www.meps.ahrq.gov. Data files and other MEPS products are made available to the research community and other interested audiences. MEPS maintains an e-mail address for technical assistance.
- MEPSnet (www.meps.ahrq.gov/MEPSNet). AHRQ has developed a set of statistical tools to allow immediate access to MEPS microdata in a nonprogramming environment. From the MEPSnet section of the MEPS Web site, through a series of interactive queries, the most inexperienced user can generate national estimates in a few seconds.
- LISTSERV. The purpose of the MEPS LISTSERV is to allow free exchange of questions and answers about the use of the MEPS database.

- Training. AHRQ conducts 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 used.
- Data Center. AHRQ's Center for Financing, Access, and Cost Trends (CFACT) operates an on-site data center to facilitate researchers' access to data that cannot otherwise be publicly released for reasons of confidentiality.

Recent Key Findings from the MEPS Household Component

National Health Care Expenses

- Health care expenses among the community population were $810.7 billion in 2002, with slightly less than a third (31.6 percent) of the expenses related to hospital inpatient services.
- Prescription medicine expenses accounted for 18.6 percent of community population spending on health care, and the mean expense for these medicines among those with expenses was $812.
- Total emergency room expenses were $27.9 billion (3.4 percent of total expenses). This was relatively small compared with other ambulatory medical care expenses ($78.9 billion for hospital outpatient services and $180.0 billion for office-based medical provider services).
- Private medical insurance—the largest third-party payer—covered 39.7 percent of total payments. Medicare and Medicaid—the primary public programs—together paid 32.8 percent of the total.
- Uninsured people under age 65 with health care expenses had relatively lower mean expenditures ($1,491), while those aged 65 and older on Medicare and other public insurance had relatively higher expenditures ($10,222).

Prescription Drug Costs

- In 1987, approximately 57 percent of the U.S. civilian noninstitutionalized population purchased 1.2 billion prescribed medicines for total expenditures of $34.7 billion (in 2001 dollars); in 2001, approximately 65 percent of the population purchased almost 2.5 billion prescribed medicines at a total expenditure of $134.1 billion.
- For those with a prescribed medicine purchase, the average total expenditures for prescribed medicines increased from approximately $253 in 1987 (in 2001 dollars) to $730 in 2001.
- The total amount paid out of pocket towards the purchase of prescribed medicines increased from approximately $19.7 billion in 1987 (in 2001 dollars) to $59 billion in 2001.

- For those with a prescribed medicine purchase, the average total amount paid out of pocket for prescribed medicines more than doubled from 1987 to 2001—from approximately $144 in 1987 (in 2001 dollars) to $321 in 2001.

Chronic Conditions

Diabetes

- The percentage of adults who reported having diabetes increased nearly one and one-half times when comparing 1987 to 2001 (4.1 percent versus 6.0 percent).
- In 2001, adults with diabetes were more than three times as likely to be extremely obese as with adults without diabetes and over one and one-half times as likely to be obese.
- In 2001, adults with diabetes were more likely than people not diagnosed with the disease to have asthma, and they were nearly three times as likely to have hypertension.
- In 2001, adults with diabetes were over three times as likely to have heart disease and more than four times as likely to have a stroke as people not reporting the condition.
- The percentage of adults who reported having diabetes and taking a prescribed medicine to treat diabetes increased when comparing 1987 (83.3 percent) to 2001 (92.9 percent).

High Cholesterol

- The percentage of adults who reported having high cholesterol was over five times as high in 2001 (7.8 percent) as in 1987 (1.4 percent).
- Of the percentage of adults who reported having high cholesterol, those who reported taking a prescribed medicine to treat high cholesterol more than doubled from 1987 (39.1 percent) to 2001 (89.7 percent).

Hypertension

- More than 45.3 million adults (21.3 percent of the population) reported that they had been told at two or more different health care visits that they had hypertension.
- The percentage of adults ever diagnosed with hypertension was 1.4 times greater for those with less than a high school education as for those with a college education (25.3 percent and 17.6 percent, respectively).
- The percentage of overweight, obese, and morbidly obese (combined) adults ever diagnosed with hypertension was twice that of healthy weight adults (26.7 percent and 13.2 percent, respectively).

Obesity

- In 2001, over 59 percent of the U.S. adult community population was overweight (body mass index ([BMI] of 25.0 to 29.9), obese (BMI of 30.0 to 39.9), or extremely obese (BMI 40 or more).
- For both males and females, there was an increase in the percentage of individuals who were obese between 1987 and 2001, a relative 76 percent and 78 percent increase, respectively.
- All race/ethnic categories of the adult population showed an increase in obesity from 1987 to 2001. Blacks were the most likely to be obese in 1987 and 2001, 19.7 percent and 32.5 percent, respectively.
- Adults with higher levels of education (some college) were the least likely to be obese (20.8 percent) in 2001.
- Adults with higher incomes (400 percent or more of the Federal poverty level) were the least likely to be obese in 1987 and 2001, 11.3 percent and 20.7 percent, respectively.
- Adults with public only health insurance were the most likely to be obese in both 1987 (22.8 percent) and 2001 (31.1 percent).

Health Insurance

- In early 2003, 16.6 percent of the U.S. civilian noninstitutionalized population (47.3 million people) was uninsured. Among those less than age 65, 18.8 percent of Americans (47 million people) were uninsured.
- Among the U.S. civilian noninstitutionalized population under 65, 35.7 percent of Hispanics and 20.8 percent of black non-Hispanic were uninsured during the first half of 2003, compared with 14.5 percent of white non-Hispanic.
- Among people under 65, Hispanics accounted for 28.2 percent of the uninsured civilian noninstitutionalized population even though they represented only 14.8 percent of the overall population this age.
- Young adults ages 19–24 were the age group at the greatest risk of being uninsured, with 36.4 percent of this group lacking health insurance.
- From 1996 to 2003, the percentage of uninsured children declined from 15.7 percent to 11.9 percent.
- The percentage of children covered by public-only health insurance increased between 1996 and 2003, from 21.3 percent to 27.5 percent. At the same time, the number of children covered by public-only insurance increased by 6.2 million, from 13.8 million to 20.0 million.
- Younger children were more likely to rely on public-only health insurance. In 2003, 34.0 percent of children aged 0–3 were covered by public-only health insurance compared with 22.6 percent of children aged 13–17.

- Hispanic children were the most likely to be uninsured in each year from 1996 to 2003 (20.8 percent in 2003).
- In 2003, 47.3 percent of children with poor or fair health status were covered by public-only health insurance.

Recent Key Findings from the MEPS Insurance Component

Employee Contributions to Employer-Sponsored Health Insurance Coverage

- The portion of private-sector employees enrolled in single coverage health insurance plans who did not contribute to the plan premium fell from 37.6 percent in 1997 to 26.6 percent in 2002.
- There was also a decline for those enrolled in family coverage; 18.5 percent of employees enrolled in family plans made no contribution to their premium in 1997 versus 14.8 percent in 2002.
- Among enrolled employees (which includes those contributing to their premium and those not contributing), the percentage of the total single premium they contributed rose from 15.6 percent in 1997 to 17.7 percent in 2002. Conversely, however, the percentage contributed overall toward the premium by those enrolled in family plans did not change significantly over the 5-year period.

Employee Copays and Deductibles for Employer-Sponsored Health Insurance

- Actual dollar employee contributions were up across the board between 1997 and 2002, with dollar contributions rising about four to six times faster than the overall inflation rate.
- From 1999 to 2002, the average annual deductible per single enrollee with a deductible increased from $335 to $409. Although there was significant variation in the average single deductible by size of employer and economic sector (public, private) the average single deductible increased for employees in all these employer groups.
- The average annual family deductible per family enrollee with a deductible increased from $772 to $920 during the period 1999 to 2002. There were significant differences in the level of this deductible by size of employer and economic sector (public and private). Family deductibles increased for employees in all these employer groups.
- From 1999 to 2002, the percentage of enrollees in employer-sponsored health insurance who had no dollar or percentage copay for a physician office visit fell from 7.9 percent to 5.1 percent. There were significant reductions across economic sectors (public and private) and small and large employers.

- The average dollar copay for a physician office visit increased from $13.30 to $15.01 over the period 1999 to 2002. This copay varied significantly by type of employer, but it increased for each economic sector (public and private) and size of employer.

Enrollment Rates for Employer-Sponsored Health Insurance

- There was a general decline in all measures of coverage for employer-sponsored health insurance among current workers in the private sector between 1999 and 2002. The percentages of employees who worked where health insurance was offered, those eligible who worked where health insurance was offered, and those eligible who enrolled were generally lower in 2002 than in 1999 for small, medium, and large firms.
- The overall enrollment rate in the private sector dropped significantly from 57.6 percent in 1999 to 55.1 percent in 2002. Of the three sizes of firms, only the large firms did not have a significant drop in the overall enrollment rate.
- Of particular note was a large decrease in the percentage of employees in small firms who worked where health insurance was offered: 67.6 percent in 1999 versus 63.5 percent in 2002. Over the same time period, the percentage of eligible employees who enrolled at small firms decreased from 80.5 percent to 78.5 percent.
- In medium firms, there was also a significant decrease from 77.1 percent to 74.5 percent in the percentage of employees eligible for health insurance where it was offered.

Healthcare Cost and Utilization Project

To help fulfill its mission of providing information on the U.S. health care system, AHRQ develops and sponsors over 50 annual hospital-related databases through the Healthcare Cost and Utilization Project (HCUP). HCUP is a Federal-State-Industry partnership to build a standardized, multi-State health data system. Through HCUP, AHRQ develops databases, software tools, and statistical reports to inform public- and private-sector policymakers, health system leaders, and researchers.

The multi-State databases contain discharge-level information in a uniform format designed to ensure patient privacy. The resulting HCUP databases facilitate tracking and research on a broad range of health policy and health services issues at the national, regional, State, and local market levels, including:

- Quality of health care.
- Cost of health services.
- Access to health care.
- Medical practice patterns.
- Hospital utilization patterns, including use by special populations.

- Disparities analyses.
- Diffusion of medical technology.
- Effects of regulation and market forces on hospitals.

The more than 50 annual HCUP databases consist of:

- The Nationwide Inpatient Sample (NIS) with inpatient data from a national sample of over 1,000 hospitals.
- The State Inpatient Databases (SID) contain the universe of inpatient discharge abstracts from participating States.
- The State Ambulatory Surgery Databases (SASD) contain data from ambulatory care encounters from hospital-affiliated and sometimes freestanding ambulatory surgery sites.
- The State Emergency Department Databases (SEDD) contain data on hospital-affiliated emergency departments for visits that do not result in hospitalizations.

In addition, AHRQ produces the Kids' Inpatient Database (KID), a nationwide sample of pediatric inpatient discharges, available for 1997 and 2000.

HCUPnet

AHRQ created HCUPnet, an Internet-based tool, to facilitate access to hospital care trend data for the Nation and for individual States. The new, improved version of HCUPnet launched in 2004 allows users to identify, track, analyze, and compare statistics on hospital utilization, outcomes, costs and charges. HCUPnet guides users in tailoring specific online queries about hospital care With a click of a button, users receive answers within seconds (http://www.ahrq.gov/hcupnet/).

Recent findings from HCUP Data

- Between 1994 and 2000, rates of preventable hospitalizations improved for certain health conditions. The most striking improvements were hospital admission rates for:
  - Treatment of angina without a procedure dropped by 71 percent.
  - Uncontrolled diabetes without complications declined nearly 30 percent.
  - Adult asthma and pediatric gastroenteritis each decreased by 20 percent.

In contrast, between 1994 and 2000, admission rates rose for other conditions as follows:

- Chronic obstructive pulmonary disease increased by 20 percent.
- Hypertension rose by 13 percent.
- Bacterial pneumonia increased by 9 percent.

- About 19 percent of individuals with an initial preventable admission have at least one additional preventable readmission within 6 months. The likelihood of readmission is higher for blacks and Hispanics than for whites and members of other racial groups.
- Between 1993 and 2002, the number of discharges from U.S. hospitals increased 9 percent (from 34.7 million to 37.8 million); the average length of stay dropped 19 percent (from 5.7 days to 4.6 days); the average charge increased 75 percent (unadjusted for inflation, from $9,800 to $17,000); and the percent of cases admitted through the emergency department increased 40 percent (from 33 percent of all admissions to 43 percent).

HCUP User Seminars

AHRQ sponsors seminars throughout the year on how to use AHRQ's Healthcare Cost and Utilization Project (HCUP). The following conferences were held in 2004:

- The Healthcare Cost and Utilization Project: Data and Tools to Support Health Services Research. This introductory Web seminar helps new users learn about HCUP, how to obtain it, and the technical assistance offered through AHRQ.
- 4th National Conference on Quality Health Care for Culturally Diverse Populations. This seminar focused on HCUP efforts to improve the coding and collection of race and ethnicity data.
- National Association of Health Data Organizations (NAHDO) Annual Meeting. This seminar covered the use of inpatient and outpatient administrative data to examine injury surveillance.

Use of HCUP data

A variety of Federal agencies, national health care organizations, States and health care journalists rely on HCUP data to examine practices and trends and guide health care decisionmaking. For example:

- HCUP NIS and SID data were used in AHRQ’s 2004 *National Healthcare Quality Report* and *National Healthcare Disparities Report*. These two reports are part of a comprehensive effort to measure the quality of health care in America.
- The National Institute on Deafness and Other Communication Disorders (NIDCD) used both NIS and KID data to develop measurable objectives for hearing.
- SAMHSA used the HCUP NIS in its report on national expenditures for mental health, and alcohol and other drug abuse treatment.
- The National Institute of Child Health and Human Development (NICHD) used HCUP statistics on children’s hospitalizations in developing its priorities for research and expenditures under the Best Pharmaceuticals for Children Act.

- Healthy People 2010, the Department's framework for prevention in the United States, used HCUP data in developing baseline measures for three ambulatory-care-sensitive conditions—pediatric asthma, uncontrolled diabetes, and immunization-preventable pneumonia and influenza.
- CMS used data from HCUPnet to examine Medicaid and Medicare hospital charges.
- *Newsweek*, the *Wall Street Journal*, and the *New York Times* used data from HCUPnet in articles to highlight in-hospital procedures and the costs associated with hospital care.

Quality Indicators

AHRQ developed the Quality Indicators, measure sets that can be used in conjunction with any hospital discharge data, as a tool to assess quality and safety of care at the hospital, State, and national levels.

The AHRQ QIs comprise the Inpatient Quality Indicators (IQIs), the Prevention Quality Indicators (PQIs), and the Patient Safety Indicators (PSIs).

- The IQIs reflect quality of care inside hospitals and include inpatient mortality for medical conditions and surgical procedures; utilization of procedures for which there are questions of overuse, underuse, or misuse; and volume of procedures for which there is evidence that a higher volume of procedures may be associated with lower mortality. The 31 indicators are specific to hospital care for heart disease and surgery, hip repair, pneumonia, childbirth, and other conditions and procedures.
- The PQIs reflect ambulatory-care-sensitive conditions and identify hospital admissions that evidence suggests could have been avoided, at least in part, through high-quality outpatient care. There are 16 PQIs covering conditions such as diabetes, asthma, heart disease, pneumonia, and selected pediatric conditions.
- The PSIs also reflect quality of care inside hospitals but focus on potentially avoidable complications and iatrogenic events. There are 26 indicators that address such topics as birth trauma, complications of anesthesia, transfusion reaction, accidental puncture and laceration, and postoperative infections.

Use of the AHRQ Quality Indicators

Public Reporting and Payment

Although the AHRQ Quality Indicators were originally developed for quality improvement purposes, some public and private purchasers and data organizations have begun to use them for hospital-level public reporting and pay-for-performance initiatives, and many others are considering doing so. To respond to user requests for guidance on using the AHRQ QIs for these expanded purposes, in

2004 AHRQ released *Guidance for Using the AHRQ Quality Indicators for Hospital-level Public Reporting or Payment* (See http://www.qualityindicators.ahrq.gov/documentation.htm)

– Texas, New York, and Colorado have incorporated the QIs into their public reporting efforts.

– Both the public and private sectors are incorporating the QIs in pay-for-performance efforts. The CMS-supported Premier Hospital Quality Incentive Demonstration is using the PSIs to measure quality performance of 277 hospitals and to recognize and financially reward hospitals that demonstrate high quality performance. In the private sector, the Anthem Blue Cross Blue Shield of Virginia Quality-In-Sights® Hospital Incentive Program relies on the PSIs to monitor specific performance objectives and align high performance with financial incentives.

Internal Quality Improvement

Many States are using the AHRQ QIs for internal quality improvement efforts.

– The Pennsylvania Health Care Cost Containment Council (PHC4), an independent State agency, used the AHRQ QIs in its research brief, *Avoidable Hospitalizations in Pennsylvania*. The report focuses on 16 conditions measured by AHRQ's PQIs.

– The State of Maine used AHRQ's PQIs in their State Health Plan to determine its rates of preventable diseases such as heart disease, diabetes, and asthma.

– The Missouri Hospital Association issued reports to their members with the IQIs and PSIs, joining many other State associations who are generating QI reports for their membership.

Goal 3. Effectiveness

AHRQ helps assure that providers and consumers/patients use accurate and timely health care information to make informed decisions and choices about their health care. To this end, AHRQ translates and disseminates research findings that have the potential to improve health care outcomes. The Agency also works to develops methods to define and measure the effectiveness of health care.

United States Preventive Services Task Force (Task Force)

The Task Force is an independent panel of private-sector experts in prevention and primary care. It conducts rigorous scientific assessments of the effectiveness of a broad range of clinical preventive services, including screening tests, chemoprevention, immunizations, and counseling, and develops recommendations for clinical preventive services. These recommendations serve as the basis for the products

produced within this portfolio. The Task Force's pioneering efforts culminated in the 1989 *Guide to Clinical Preventive Services*. The most recent edition, *The Guide to Clinical Preventive Services, Third Edition: Periodic Updates*, is updated with semi-annual installments of recommendations from the Task Force supplemented by an annual cumulative update of Task Force recommendations on CD-ROM.

In addition, AHRQ revised and improved its interactive clinical decision-support tool for personal digital assistants (PDAs) to include the Interactive Preventive Services Selector which is designed for clinicians to use at the bedside to deliver evidence-based care according to recommendations from the Task Force when they are with a patient. The Interactive Preventive Services Selector helps clinicians quickly and easily search for which preventive services to provide or not provide to patients based on their age and sex.

In 2004, the Task Force issued recommendations on the following topics:

- Alcohol Misuse: Screening and Behavioral Counseling
- Back Pain, Lower: Counseling
- Bacteriuria: Screening
- Bladder Cancer: Screening
- Coronary Heart Disease: Screening
- Dental Caries in Preschool Children: Screening
- Family Violence: Screening
- Hepatitis B Virus Infection: Screening
- Hepatitis C: Screening
- Idiopathic Scoliosis in Adolescents: Screening
- Lung Cancer: Screening
- Oral Cancer: Screening
- Pancreatic Cancer: Screening
- Rh Incompatibility: Screening
- Suicide Risk: Screening
- Syphilis: Screening
- Testicular Cancer: Screening
- Thyroid Disease: Screening
- Visual Impairment in Children Ages 0-5: Screening

Prevention Dissemination and Implementation

Put Prevention Into Practice

Through the Put Prevention into Practice (PPIP) program, AHRQ disseminates evidence-based information to improve the delivery of appropriate clinical preventive services, such as those based on USPSTF recommendations. The tools and resources of this program support public and private health care organizations and engage the entire health care delivery system, including clinicians, health care provider

organizations, employers, insurers, and consumers.

The PPIP program develops tools and resources that enable doctors and other health care professionals to determine what preventive services patients should receive as well as enable patients to more easily understand and keep track of their preventive care. Its purpose is to increase the appropriate use of clinical preventive services, such as screening tests, chemoprevention (the use of medications to prevent disease), and counseling.

PPIP materials include:

- The *Clinician's Handbook of Preventive Services, Third Edition*. This is both a reference tool and a practical guide to delivering clinical preventive services in a variety of settings.
- Materials for clinical office staff, including preventive care flow sheets, reminder postcards, and prevention timeline posters.
- Pocket-sized guides for health care consumers, including the *Pocket Guide to Good Health for Adults, Staying Healthy at 50+*, and *Pocket Guide to Good Health for Children* (all available in English and Spanish).

VA Relies on PPIP Guide

The Department of Veteran Affairs (VA) National Center for Health Promotion and Disease Prevention (NCP) has developed and will be promoting a new Prevention Program Manual to help each of the 162 VA clinical sites focus on and enhance disease prevention. The new program is a significant element in the NCP's overall mandate to promote wellness and disease prevention among veterans. The manual provides step-by-step instructions for the development and implementation of prevention programs and builds on the AHRQ's Put Prevention Into Practice (PIPP) Implementation Guide.

Safe and Effective Use of Pharmaceuticals

Pharmaceuticals and other medical products improve the lives of many patients, yet underuse, overuse, adverse events, and medical errors may cause serious impairment to patient health. Since 1992, AHRQ has funded studies focused on patient outcomes associated with pharmaceutical therapy. These studies have addressed many important questions regarding the management of drug prescribing.

Centers for Education and Research on Therapeutics

The Centers for Education and Research on Therapeutics (CERTs) demonstration program is a national initiative to conduct research and provide education that advances the optimal use of therapeutics (i.e., drugs, medical devices, and biological products). The program consists of seven research centers and a Coordinating Center and is administered as a cooperative agreement by AHRQ in consultation with the Food and Drug Adminstration.

CERTs Organization and Focus

Duke University Medical Center
Therapies for disorders of the heart and blood vessels.

HMO Research Network
Drug use; safety and effectiveness studies in health maintenance organization populations.

University of Alabama at Birmingham
Therapies for musculoskeletal disorders.

University of Arizona Health Sciences Center
Reduction of drug interactions that result in harm to women.

University of North Carolina at Chapel Hill
Therapies for children.

University of Pennsylvania School of Medicine
Therapies for infection; antibiotic drug resistance.

Vanderbilt University Medical Center
Prescription drug use in a Medicaid population.

The CERTs receive funds from both public and private sources, with AHRQ providing core financial support. The research conducted by the CERTs program has three major aims:

1. To increase awareness of both the uses and risks of new drugs and drug combinations, biological products, and devices, as well as of mechanisms to improve their safe and effective use.
2. To provide clinical information to patients and consumers; health care providers; pharmacists, pharmacy HMOs, and health care delivery systems; insurers; and government agencies.
3. To improve quality while reducing the cost of care by increasing the appropriate use of drugs, biological products, and devices and by preventing their adverse drug events and their sequence (such as unnecessary hospitalizations).

The CERTs Coordinating Center is located at Duke University Medical Center. Directed by Robert M. Califf, M.D., the Coordinating Center helps support the work of the research centers by enhancing cross-center synergy and disseminating findings from the research conducted by the centers.

Partnerships and Collaboration

A core tenet of the CERTs program is the belief that collaboration among groups with different perspectives and resources is critical if the results are to be applicable in "real world" settings. The centers work with public and private collaborators on projects, which allows each center to expand the number of its projects and extend their potential impact.

The CERTs are committed to creating a collaborative environment with other organizations interested in advancing the best use of therapeutics. For that purpose, a "Partnerships to Advance Therapeutics" (PATHs) program was established as an integral part of the CERTs initiative. Each year, the CERTs host a PATHs meeting of leaders from public and private organizations concerned about the quality and safety of health care. Partners and participants include organizations representing patients, health care providers, government, academia, delivery systems, payers, purchasers, and manufacturers of medical products.

Findings from AHRQ pharmaceutical research have yielded important insights for the health care system. Some key issues and recent findings from AHRQ's CERTs iniative include:

- A new study by the HMO Research Network CERT of postmenopausal women in seven health maintenance organizations across the United States found that only 24 percent of women who had suffered an osteoporosis-related fracture received drug treatment for osteoporosis within a year following the fracture. Women who suffered a fracture of the vertebra were twice as likely to receive medication to treat osteoporosis (44 percent) as those with a hip fracture (21 percent) or wrist fracture (23 percent). Also, older women were less likely than younger women to receive osteoporosis treatment, even though aging increases the risk of fracture.
- Monitoring blood concentration of protease inhibitors (PIs) may improve the care of both HIV-infected adults and children. Researchers at Ohio State University and the Columbus Children's Hospital through the CERTs' program examined laboratory data on 10 adults and 15 children with HIV disease. Nondetectable concentrations were found in 33 percent of adult samples and 24 percent of pediatric samples. The clinicians were able to identify and correct important clinical problems, including drug-drug interactions, drug administration problems,

CERTs Research Findings in Action

Wayne Ray, Ph.D., Vanderbilt University Medical Center CERT, and Brian Strom, M.D., University of Pennsylvania CERT, were featured in the October 4 *Wall Street Journal*, among other publications, and Robert Califf, M.D., Duke University Medical Center CERT appeared on the October 7 Today Show—on the worldwide withdrawal of the arthritis medication Vioxx. Merck & Co. withdrew the drug because of increased risk of heart attack and stroke in people using the medication, as well as drug safety processes. These stories referred to earlier CERTs research that found potential problems with Vioxx. Dr. Ray was also in the news recently regarding his study of oral erythromycin (an older and widely used antibiotic) when used together with newer drugs such as those that inhibit CYP3A drug enzymes, i.e., certain calcium-channel blockers, certain antifungal drugs, and some antidepressants.

and noncompliance. Routine PI monitoring and interpretation could improve the care of adult and pediatric HIV patients, especially patients who do not respond as expected to treatment, develop viral resistance or toxicity, or have questionable compliance.

- Patients who undergo surgery for gastroesophageal reflux disease (GERD) use fewer GERD-related medications and outpatient visits than those who are treated only with medication, according to a study conducted by the Vanderbilt University CERT. In 1996, all patients in the surgical group underwent fundoplication (which creates a one-way valve in the esophagus to allow food into the stomach and prevent backflow of stomach acid, thus preventing GERD). Patients in the medical group were treated without fundoplication. During the 4-year followup period, the surgical group had fewer GERD-related outpatient physician visits (5.5 vs. 6.7 visits). During each year of followup, the proportion of patients using GERD medications was lower in the surgical group than in the medication only group (0.67 vs. 0.93 in year 1; 0.67 vs. 0.91 in year 2; 0.72 vs. 0.85 in year 3; and 0.74 vs. 0.90 in year 4, respectively).
- Use of higher dose tricyclic and other cyclic antidepressants (TCAs) increases the risk of sudden cardiac death, indicating such TCA doses should be used cautiously, particularly in patients with preexisting cardiovascular disease or the elderly, according to a study by the Vanderbilt University CERT. Compared with nonusers of antidepressants, users of high- or low-dose selective serotonin reuptake inhibitors sudden cardiac and current users of low-dose TCAs had similar rates of sudden cardiac death. However, patients taking TCA doses of 100 mg or greater had a 41 percent greater rate of sudden cardiac death, and those taking TCA doses of 300 mg or greater had a 2.5-fold greater rate of death than patients not taking antidepressants. There was no evidence that TCA doses lower than 100 mg increased the risk of sudden cardiac death in subgroups who already had elevated risk, such as the elderly or those with preexisting cardiovascular disease.

New Web Site Focuses On Medication Safety and Use

The AHRQ-sponsored HMO Research Network CERT collaborated with the American Association of Health Plans-Health Insurance Association of America to develop content for a new Web site, "The Tools and Techniques of Improved Medication Use," for those in the health care community who design medication safety programs and/or seek information to enhance existing patient safety efforts. The site includes selected studies as well as resources needed to replicate strategies known to achieve important results in medication safety and use.

Promoting Evidence-Based Health Care

Health care decisionmakers need a synthesis of the best evidence that is understandable, objective, and places the ever-increasing number of scientific studies in context. AHRQ is committed to accelerating the adoption of science into practice so that all Americans benefit from advances in biomedical science.

Evidence-based Practice Centers

Since the creation of the Evidence-based Practice Center (EPC) program in 1997, AHRQ has published over 120 new evidence reports and technology reports. The goal is to inform health plans, providers, purchasers, and the health care system as a whole by providing essential science-based information to improve health care quality.

The EPCs systematically review the relevant scientific literature on topics assigned to them by AHRQ and conduct additional analyses when appropriate prior to developing their reports and assessments. The 13 AHRQ-supported EPCs were awarded 5-year contacts in 2002:

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

Professional societies, providers, and other private-sector entities use AHRQ evidence reports to develop evidence-based clinical care practices and related health policies. Several of AHRQ's customers have used Evidence Report No. 43, *Making Health Care Safer: A Critical Analysis of Patient Safety Practices*, to examine options and priorities in patient safety practices:

- Blue Cross Blue Shield (BCBS) of Michigan used the patient safety practices as part of its acute care hospital incentive program in 2004. Participating hospitals will select and comply with three of seven National Quality Forum-Endorsed Safe Practices, which are based on the AHRQ report. Six of the seven practices selected by BCBS of Michigan for inclusion in their incentive program are AHRQ-recommended practices.
- The Florida Hospital Association (FHA) developed a patient safety tool kit— a compendium of patient safety resources organized by general subject areas. Each reference consists of the title of the document and a Web link to it. For example, the resource on the FHA Web site is indexed under Surgical Safety and posted as follows: AHRQ Making Health Care Safer www.ahcpr.gov/clinic/ptsafety/chap43b.htm.
- Creighton University in Omaha, NE, used the evidence report to develop a new interprofessional patient safety course. The course will be offered as an elective to students of medicine, dentistry, law, nursing, pharmacy, occupational therapy, physical therapy, social work, and business. Approximately 70 students were enrolled for spring 2005. The goal of the course is to serve as a foundation for educating students on issues of patient safety by providing a theoretical and adaptable framework for future applications in each student's respective discipline. The Evidence Report provided appropriate critical analysis to define the breadth and scope of the course, as well as numerous evidence-based approaches and case-based applications that will be used in case examples throughout the course curriculum.
- Saint Vincent Health Center in Erie, PA, developed a new program that incorporates the postoperative use of beta-blockers for high-risk cardiac patients. After a successful 4-month pilot program, staff members are expanding the program to the entire hospital. Saint Vincent distributed 50 copies of Chapter 25, AHRQ's summary on the use of peri- and postoperative beta-blockers, half to anesthesia providers and half to surgeons and nursing leaders. The distribution of this information resulted in an increased awareness of research that beta-blockers can improve patient outcomes.

Evidence Report Topics Published in FY 2004

- Literacy and Health Outcomes.
- Pharmacological Treatment of Dementia.
- Pharmacological and Surgical Treatment of Obesity.
- Use of Glycated Hemoglobin and Microalbuminuria in the Monitoring of Diabetes Mellitus.
- Total Knee Replacement.
- Strategies for Improving Minority Healthcare Quality.
- Effectiveness of Antimicrobial Adjuncts to Scaling and Root-Planing Therapy for Periodontitis.
- Regionalization of Bioterrorism Preparedness and Response.
- Training of Hospital Staff to Respond to a Mass Casualty Incident.
- Effects of Omega-3 Fatty Acids on Cardiovascular Disease.
- Effects of Omega-3 Fatty Acids on Cardiovascular Risk Factors and Intermediate Markers for Cardiovascular Disease.
- Effects of Omega-3 Fatty Acids on Arrhythmogenic Mechanisms in Animal and Isolated Organ/Cell Culture Studies.
- Health Effects of Omega-3 Fatty Acids on Asthma.
- Health Effects of Omega-3 Fatty Acids on Lipids and Glycemic Control in Type II Diabetes and the Metabolic Syndrome, and on Inflammatory Bowel Disease, Rheumatoid Arthritis, Renal Disease, Systemic Lupus Erythematosus, and Osteoporosis.
- Celiac Disease.
- Community-Based Participatory Research Assessing the Evidence.
- Criteria to Determine Disability Related to Multiple Sclerosis.
- Economic Incentives for Preventive Care.
- Islet Transplantation in Patients with Type 1 Diabetes Mellitus.
- Measuring the Quality of Breast Cancer Care in Women.
- Preventing Violence and Related Health-Risking Social Behaviors in Adolescents.
- Closing the Quality Gap: A Critical Analysis of Quality Improvement Strategies. Technical Review No. 9.
  - Volume 1. Series Overview and Methodology.
  - Volume 2. Diabetes Mellitus Care.
- Strategies to Support Quality-Based Purchasing.

National Guidelines Clearinghouse™

The National Guidelines Clearinghouse™ (NGC) was developed in partnership with the American Medical Association and the American Association of Health Plans. The NGC is a Web-based resource for information on over 1,300 evidence-based clinical practice guidelines. Since becoming fully operational in early 1999, the NGC has had over 2 million visits and now receives over 135,000 visits each month. The NGC helps health care professionals and health system leaders select appropriate treatment recommendations by providing full text or an abstract of the recommendations, comparing and evaluating different recommendations, and describing how they were developed.

In response to user feedback, enhancements were added to the NGC and its Web site in 2004:

- A new CD-ROM tutorial walks users through a series of informative demonstrations and scenarios on how to use the enhanced site.
- A new MS Word® download feature allows users to download and view the complete summary for each guideline represented in the NGC database. The new feature works on all computers that use Microsoft Word. NGC content may also be downloaded to Personal Digital Assistants that can read Microsoft Word documents.
- NGC syntheses became available in PDF format, a printer-friendly version. NGC syntheses are analyses of guidelines that cover similar topic areas. Key elements of each synthesis include the scope of the guidelines, the interventions and practices considered, the major recommendations along with the corresponding rating schemes for quality of the evidence and strength of the recommendation, the areas of agreement, and the areas of difference.
- A new "Guidelines in Progress" page lists the guidelines submitted to NGC, accepted for inclusion, and for which copyright has been obtained. This page allows users to see if guidelines of interest to them are being abstracted and prepared for inclusion on the NGC site. The page will change as the status of guidelines in the work queue changes from "in progress" to "published" or "withdrawn."
- Enhanced summary content is now provided, such as methods used to formulate the recommendations, rating schemes for the strength of the recommendations, references supporting the major recommendations, contraindications, financial disclosures and the Institute of Medicine's National Healthcare Quality Report categories.
- An enhanced Detailed Search feature allows users to filter searches by the methodology and IOM categories.

- A glossary of all the controlled vocabulary terms utilized in the NGC has been added.
- Web developer tools, such as RSS feeds of the entire inventory of NGC content, and a new Search Form feature which offers Web developers the ability to create their own unique search interfaces with the NGC Web site are now operational.

Chapter 7. Strategic Goals and Performance Planning at AHRQ

Portfolios of Work

The Agency's internal structure and activities are organized under a series of portfolios that contribute to AHRQ's overarching strategic goals and reflect our priorities and those of the health care system. These portfolios are combinations of activities that reflect the broad spectrum of the Agency's work. Our goals are to capitalize on the research strengths and expertise throughout the Agency, communicate the focus of our research clearly, and ensure that our focus stays on moving research from idea generation to strategies that can be adopted into practice. The portfolios clarify our research investments and assure that the continuum of research from conception to generation is applied in practice and policy.

AHRQ has developed 11 standard portfolios of work:

- Quality/safety of patient care.
- Health information technology.
- Data development.
- Cost, organization, and socioeconomics.
- Long-term care.
- Pharmaceutical outcomes.
- Care management.
- Prevention.
- Training.
- System capacity and bioterrorism.
- Organizational support.

Quality/Safety of Patient Care

The quality/safety of patient care portfolio works to improve health care outcomes by increasing the levels of safety and quality in the health care system, especially through partnerships with public- and private-sector groups to speed the adoption of research findings into both practice and policy. This portfolio includes quality and patient safety research that is designed to:

- Develop innovative approaches to collecting, analyzing, and reporting patient safety information.
- Transform that research into improving the quality and safety of care provided by doctors, nurses, and other health professionals.
- Foster the use of information technology to reduce medical errors.

Health Information Technology

The Institute of Medicine has identified health information technology (health IT) as one of the most significant tools that could help to improve health care quality. The health IT portfolio works to improve health care outcomes through research and the development, diffusion, and adoption of health information technology that improves the quality, safety, and efficiency of health care. Since the late 1960s, AHRQ has been providing the research base for the use of health IT and decision-support systems to improve the quality of care. Within this portfolio, AHRQ sponsors research, programs, and initiatives that focus on reducing medical errors, increasing health information sharing, helping patients transition between health care settings, and increasing our knowledge and understanding of the clinical, financial, and organizational value and benefits of health IT, as well as its contributors to patient safety and quality of care.

Data Development Portfolio

Comprehensive data on health care use, quality, costs, and payment systems in the United States provide AHRQ customers with timely information for use in evaluating and making decisions about health care services. The data development portfolio develops and maintains tools that measure and enhance quality, efficiency, and effectiveness and helps transform research into practice by providing data and information that can be used by health care decisionmakers to make informed choices. This portfolio encompasses AHRQ's expanding family of databases, software, quality indicators, and other evidence-based research tools.

Cost, Organization, and Socio-Economics

How services are organized and financed has a significant impact on the health care an individual receives. The cost, organization, and socioeconomics portfolio provides public and private decisionmakers with the information, tools, and assistance they need to organize, finance, pay for, and regulate health care. Research conducted as part of this portfolio responds to the information needs of Federal, State, and local policymakers; public and private purchasers; and health care system leaders.

Long-Term Care

The need for long-term care services is expected to increase dramatically in this country as the population ages. By 2025, the number of Medicare beneficiaries is expected to reach almost 70 million, or about 20 percent of the U.S. population. Long-term care refers to care provided for people of all ages who need assistance with basic activities of daily living and role functioning who are living in the community or in residential care settings such as assisted living facilities or nursing homes. The long-term care portfolio develops processes and tools supported by evidence–based research and helps integrate them into the practice of care. In addition the portfolio

provides consumers of long-term care with tools and evidence-based information to help them make informed decisions.

Pharmaceutical Outcomes

Understanding which medications work for which patients and at what cost is important in managing the selection of pharmaceutical therapies and services in a changing health care environment. The pharmaceutical outcomes portfolio develops and disseminates evidence on the safe and effective use of pharmaceuticals. This portfolio addresses many of today's most critical health care issues including: treatment effectiveness, patient safety, cost and quality of care, development of tools to support evidence-based practice, racial and ethnic disparities, management of chronic conditions, disease prevention, and the special needs of vulnerable populations.

Care Management

Reducing disease and disability by increasing the delivery of effective tests and treatments for acute and chronic medical problems is the heart of the care management portfolio. This portfolio helps increase the delivery of evidence-based treatments for acute and chronic conditions through research and research syntheses, development of tools, identification of effective implementation strategies, and the promotion of effective policies. The portfolio encompasses intramural and extramural work in areas that help create the infrastructure for effective care.

Prevention

Thousands of Americans die prematurely each year as a result of diseases that often are preventable, such as heart disease, diabetes, some cancers, and HIV/AIDS. AHRQ's unique contribution to prevention research includes a focus on primary and secondary prevention within the primary care setting. This portfolio supports research on preventive care through adoption, delivery, and use of evidence-based clinical preventive services. This portfolio is helping to develop an evidence-based model for health care organizations to minimize multi-risk behaviors among patients. The purpose is to inform, motivate, and support the redesign of primary care delivery systems to improve delivery of evidence-based preventive services.

Training

Health services researchers focus on some of the most complex and challenging issues currently affecting health care in the United States, and training new investigators is fundamental to producing the next generation of health services researchers. The training portfolio fosters the growth, dissemination, and translation of health services research and encourages growth in the science by nurturing the development of trained scientists. Prime focus is placed on the next generation of researchers by

ensuring that the researchers and institutions conducting research are responsive to changes in the delivery of health care services in order to enhance quality, efficiency, and effectiveness of health care and improve patient safety. Success of these endeavors will be measured in terms of developing productive researchers who in turn develop new knowledge that is ultimately translated into practice or contributes to improvements in health delivery, policy or clinical care at the local, State, and national level.

System Capacity and Bioterrorism

As demonstrated by the attacks of September 11, 2001, and the subsequent use of anthrax as a biological weapon, bioterrorism represents a significant public health threat to the United States. To address this threat, we need to enhance the capacity of Federal, State, and local entities to respond to potential bioterrorism events. The system capacity and bioterrorism portfolio provides support to empower communities by enhancing their capacity of the health care systems to respond to urgent and emergent situations and needs. Research projects in this portfolio examine an array of issues pertinent to clinicians, hospitals, and health care systems. These include linkages among providers, local and State public health departments, emergency responders, and others preparing to respond to terrorist events and other public health emergencies, as well as regional planning and surge capacity issues.

Organizational Support

This portfolio supports the overall direction and management of the AHRQ, including the formulation of policies and program objectives and administrative management and services. The principles which guide the Agency's management structure include:

- An organizational structure that stresses simplified, shared decisionmaking.
- Avoidance of redundancies in administrative processes.
- Ensuring clear lines of communication and authority.
- A strong emphasis on employee involvement in all Agency matters.
- Recognizing and rewarding employee accomplishments and contributions to the AHRQ's mission.

	AHRQ Strategic Goal Areas			
	Safety/Quality – Improve health care safety and quality for Americans through evidence based research and translation.	**Efficiency –** Develop strategies to improve access, foster appropriate use, and reduce unnecessary expenditures.	**Effectiveness –** Translate, disseminate, and implement research findings that improve health care outcomes.	**Organizational Excellence –** Develop efficient and responsive business processes.
AHRQ Portfolios of Work				
Quality/Safety of Patient Care	X	X	X	
Health Information Technology	X	X	X	
Data Developments	X	X	X	
Cost, Organization, and Socioeconomics	X	X	X	
Long-term Care	X	X	X	
Pharmaceutical Outcomes	X	X	X	
Care Management	X	X	X	
Prevention	X	X	X	
Training	X	X	X	
System Capacity and Bioterrorism	X	X	X	
Organizational Support				X

Part 2. Financial Management

AHRQ's Financial Performance, FY 2004

Overview of Financial Performance

AHRQ's Chief Financial Officer (CFO) is responsible for the financial leadership of the Agency, which entails overseeing all financial management functions relating to the programs and operation of the organization. The CFO is also tasked with developing and maintaining integrated Agency financial management systems, establishing internal controls, and ensuring that activities associated with financial management legislation, such as the Acts shown below, are carried out.

Year	Legislation	Description
1982	Federal Managers Financial Integrity Act	Addresses adequacy of internal accounting and administrative controls in Federal executive agencies.
1990	Chief Financial Officers Act	Establishes higher standards for accounting and financial reporting, requires the designation of a CFO in each major Federal organization, identifies requirements for improving accounting systems and internal controls, and mandates audits of annual financial statements.
1993	Government Performance and Results Act	Requires OMB to submit a strategic plan, outcome-related goals and objectives for program activities, and a description of how the goals and objectives will be achieved, as well as mandates the development of an annual performance plan covering each program activity.
1994	Government Management Reform Act	Contains miscellaneous housekeeping and administrative provisions, and requires Federal organizations to submit an audited financial statement for the preceding fiscal year by March 1 of each year.
1996	Federal Financial Management Act	Incorporates the Federal Accounting Standards Advisory Board's (FASAB) accounting and financial management systems, and requires that standard general ledgers be implemented at the transaction level.

AHRQ's Office of Performance Accountability, Resources, and Technology (OPART) takes the lead in directing Agency budget, financial management, performance and accountability, and legislative activities. OPART is responsible for integrating program planning with budget and performance; directing financial management activities such as budget formulation, presentation, execution, and audit related functions; and serving as the Agency's focal point for Government Performance and Results Act activities and the President's Management Agenda Initiatives.

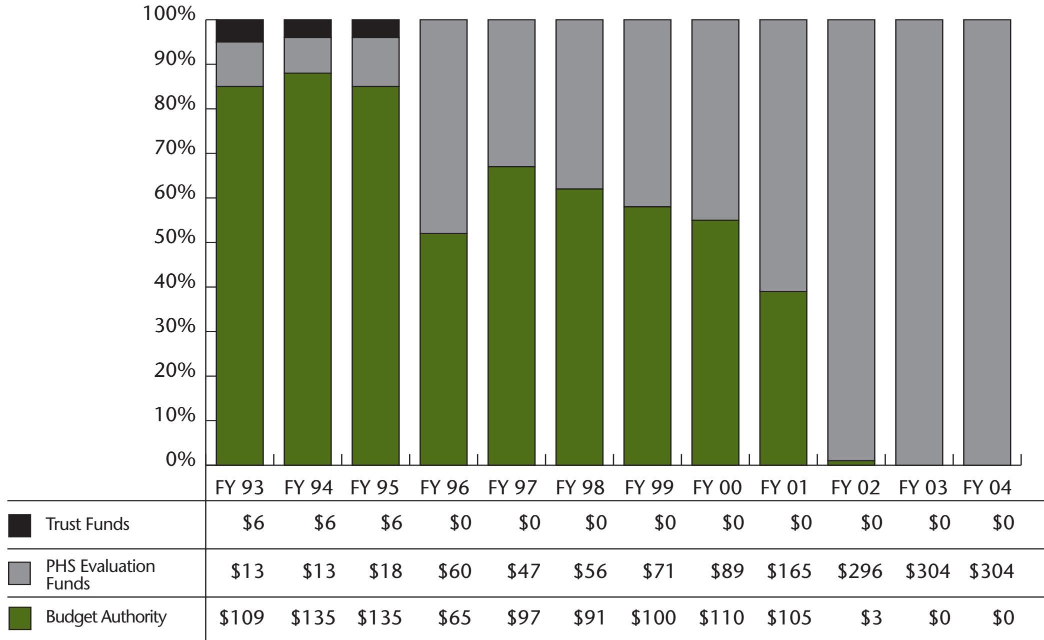
AHRQ procures its fiscal services from the Department's Program Support Center (PSC), Division of Financial Operations (DFO), on a fee-for-service basis. DFO supplies AHRQ with payment management services for Federal grant, contract, and program activities; accounting and fiscal services including preparation of financial statements; debt management services; and personnel and payroll administration services. In addition to fiscal and human resources advice, DFO also provides technical direction and policy guidance to assure new initiatives are implemented in compliance with regulatory requirements. AHRQ staff work closely with DFO staff to facilitate the Department's annual top-down audit process and to meet the accelerated audit cycle deadlines mandated in the Reports Consolidation Act.

Budgetary Resources

AHRQ receives its funding through a discretionary one-year appropriation account made available by Congress that includes Federal and reimbursable funds. Each fiscal year, the Secretary of the Department of Health and Human Services (DHHS) is authorized to reallocate up to a specific percentage (2.2 percent in FY 2004) of the funds appropriated to Department agencies. These funds are known as PHS Evaluation Funds. Since FY 2002, PHS Evaluation Funds have comprised AHRQ's entire appropriation. Because these funds are provided from the appropriations of other DHHS agencies, they are considered reimbursable funds, and as such are classified as exchange revenue on AHRQ's financial statements.

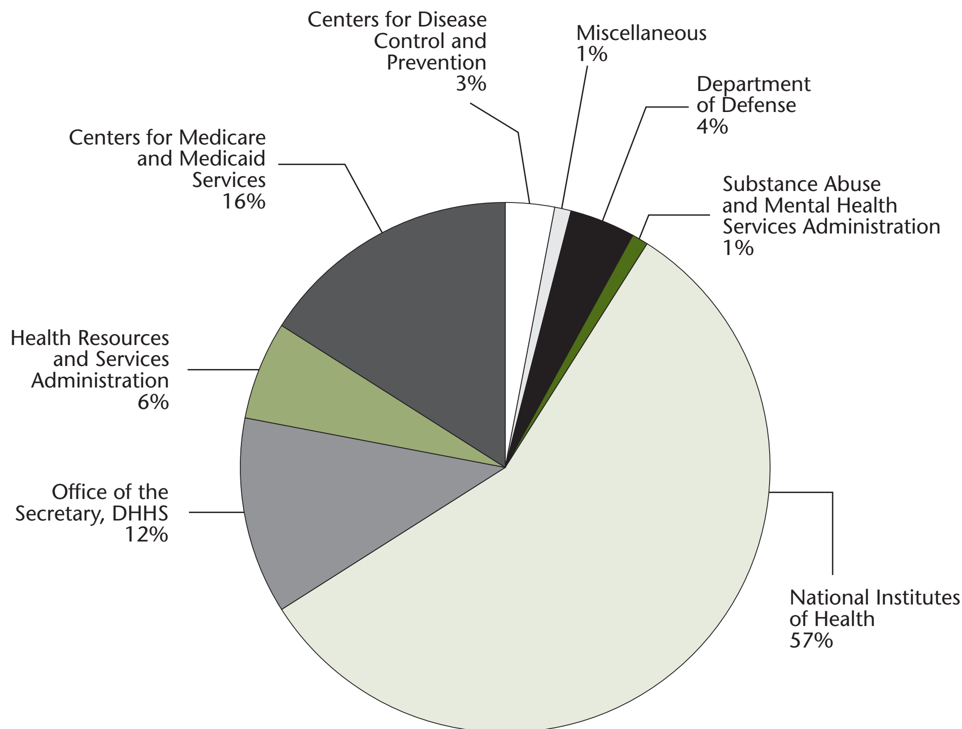
AHRQ also receives reimbursable funds from other Federal organizations, usually in the form of expenditure transfers (payments made from one account to another). In FY 2004, AHRQ received $27 million from other Federal organizations, including $15 million from our primary reimbursable partner, the National Institutes of Health (NIH). AHRQ's health services research complements the biomedical research of the NIH by helping clinicians, patients, and health care institutions make choices about what treatments work best, for whom, when, and at what cost.

AHRQ Appropriations 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	FY 03	FY 04
Trust Funds	$6	$6	$6	$0	$0	$0	$0	$0	$0	$0	$0	$0
PHS Evaluation Funds	$13	$13	$18	$60	$47	$56	$71	$89	$165	$296	$304	$304
Budget Authority	$109	$135	$135	$65	$97	$91	$100	$110	$105	$3	$0	$0

FY 2004 AHRQ Reimbursable Partners
(Percentage of AHRQ Reimbursable Funds by Partner)



In addition, AHRQ realizes a modest amount of 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 costs associated with responding to these requests.

Mechanisms of Support

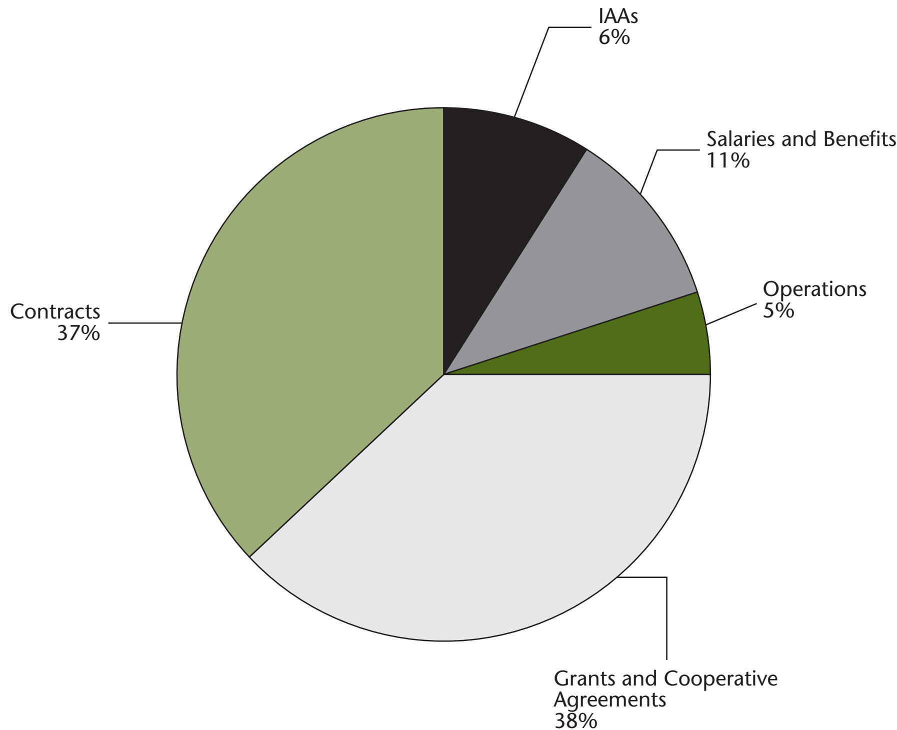
AHRQ provides financial support to public and private nonprofit entities and individuals through the award of grants, cooperative agreements, contracts, and interagency agreements.

What determines the mechanism?

Grants	Used when there is a public purpose authorized by statute that must be accomplished, and no substantial involvement is anticipated between the Federal organization and the recipient during the performance of the activity.
Cooperative Agreements	Used when there is a public purpose authorized by statute that must be accomplished, and substantial involvement is anticipated between the Federal organization and the recipient during the performance of the activity.
Contracts	Used when the purpose is the acquisition, purchase, lease, or barter of property or services for the direct benefit of the Federal government.
Interagency Agreements	Used when a Federal organization provides to, purchases from, or exchanges goods or services with another Federal organization.

Program Announcements (PAs) and Requests for Applications (RFAs) are used to invite research project grant applications. In addition to the research project grants that have an average duration of 3 to 4 years, AHRQ supports one-year grants. The one-year grants include small grants that facilitate the initiation of studies for preliminary short-term goals, dissertation grants undertaken as part of an academic program to earn a research doctoral degree, and conference grants that complement and promote AHRQ's core research and help the Agency further its mission. In addition, AHRQ funds training grants that support a variety of training and career development opportunities for individuals and institutional programs. The Agency also awards minority supplements to ongoing grants that have at least two years of committed support remaining for the purpose of training and providing health services research experience to minorities or to support research on minority health issues.

FY 2004 AHRQ Obligations by Mechanism



AHRQ uses the contract and Interagency Agreement (IAA) mechanisms to carry out a wide variety of directed health services research related activities. AHRQ advertises our contract opportunities on the Internet at Federal Business Opportunities (www.fedbizopps.gov) and posts our Requests for Proposals (RFPs) on the AHRQ website. 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.

Analysis of Financial Statements

In accordance with the Chief Financial Officers Act of 1990 and subsequent laws, Federal agencies are required to prepare and have audited five principal annual financial statements.

Statement name	Purpose
Balance Sheet	Conveys a snapshot of an organization's financial standing as of a specific date. Provides information on financial position—what an organization owns (assets), and what an organization owes (liabilities).
Statement of Net Cost	Presents how an organization spends—the total costs incurred by an organization less any earned revenue.
Statement of Budgetary Resources	Reports where the money comes from--how an organization's budgetary resources were obtained and the status of the remaining balances.
Statement of Financing	Reflects the relationship between proprietary accounts (cost based financial transactions) and budgetary accounts (budget based transactions).
Statement of Changes in Net Position	Shows where an organization stands--the beginning net position (i.e., unexpended appropriations and the budgetary resources available less expenses), the transactions that affect net position for the period, and the ending net position.

These statements provide accountability for the Federal monies used, resources consumed, and level of performance and program effectiveness achieved. AHRQ's financial statements report the Agency's financial information 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.

How AHRQ's PHS Evaluation Funds are Reflected in the Financial Statements

Starting in FY 2003, AHRQ's PHS Evaluation Funds were deemed to be exchange revenue as opposed to non-exchange revenue. Exchange revenue arises when a government entity provides goods and services to the public or to another government entity for a price.

Prior to FY 2003, AHRQ's PHS Evaluation Funds were considered non-exchange revenue, and the entire amount allocated to AHRQ in a given fiscal year was billed and collected in the same fiscal year the funds were allocated. Now that the Agency's PHS Evaluation Funds are deemed exchange revenue, the funds allocated to AHRQ in a given fiscal year are billed and collected as costs are incurred. The costs reflect actual PHS Evaluation Fund expenses (mostly disbursements) plus estimated accruals for grants and contracts. The difference in accounting treatment and presentation for exchange versus non-exchange along with the fact that AHRQ is collecting PHS

Evaluation Funds as costs are incurred instead of in the same fiscal year the funds are allocated, has resulted in a significant change in the amounts presented in AHRQ's FY 2003 and FY 2004 financial statements as compared to the amounts presented in AHRQ's FY 2002 and prior financial statements.

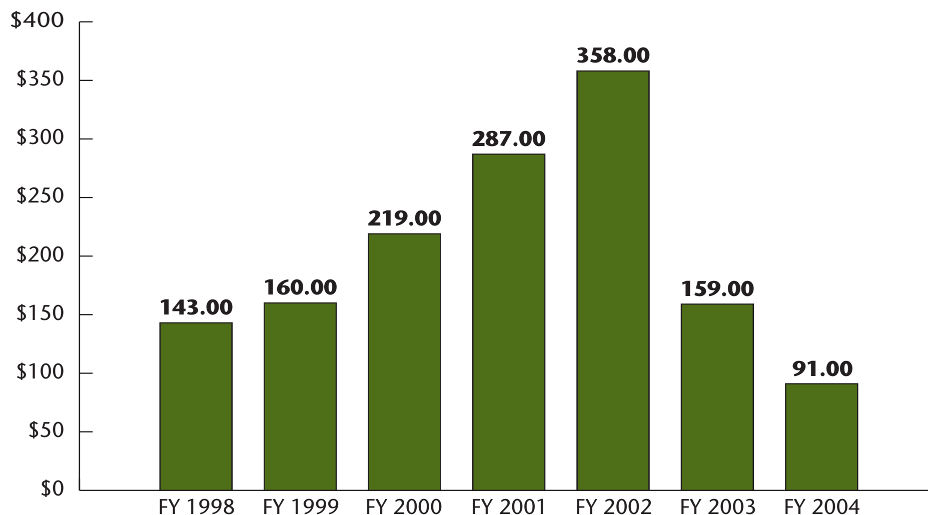
Balance Sheet

The major components of the balance sheet are assets, liabilities, and net position.

Assets

Assets are any items of economic value owned by an organization. There are two types of assets: tangible and intangible. Tangible assets include cash, investments, equipment, inventory, and real property. Intangible assets include patents and other intellectual property. In general, assets are initially recorded when received regardless of when payment is made or the asset is used.

AHRQ's FY 2004 assets totaled $90.6 million, a decrease of $68.1 million from the FY 2003 amount of $158.7 million. The decrease in assets resulted primarily from a reduction in the Fund Balance with Treasury (FBWT), which represents undisbursed cash balances mostly from appropriations—dollars maintained by the Treasury Department to pay current liabilities, accounts payable, and undelivered orders. The decrease illustrates the impact of treating PHS Evaluation Funds as exchange revenue as opposed to non-exchange revenue, and collecting these funds over a three-year period instead of in the same fiscal year the funds were appropriated. AHRQ's assets were comprised almost completely of Fund Balances with Treasury (91%), the equivalent of cash in the bank, most of which has been committed to grantees and contractors. AHRQ does not maintain any cash balances outside of the U.S. Treasury

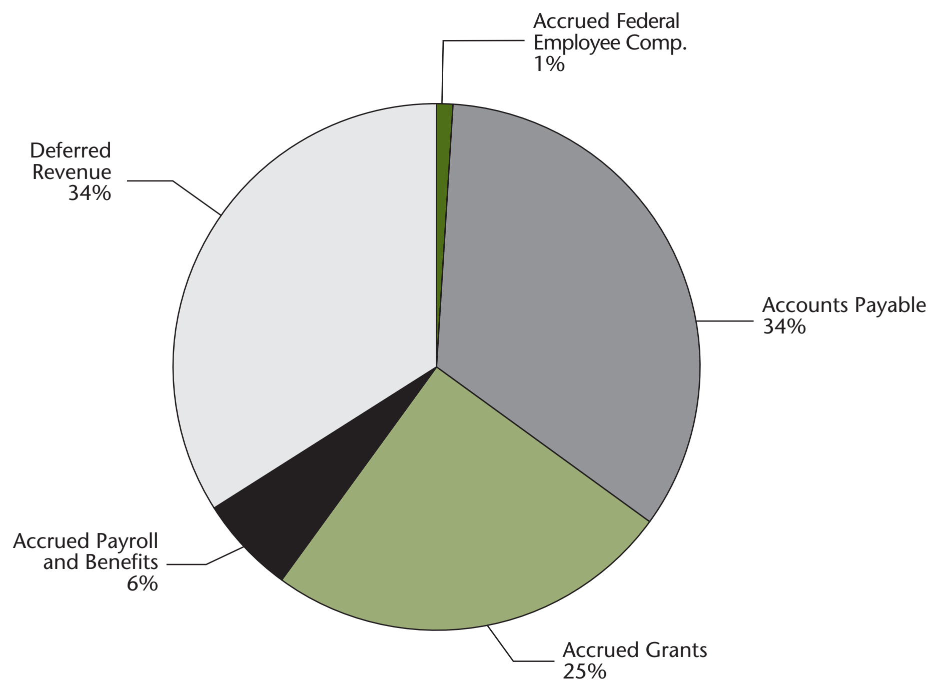


and does not have any revolving or trust funds. The remaining 9% of AHRQ's assets were made up of accounts receivable—funds owned to AHRQ by other Federal agencies under reimbursable agreements for which payment has not been received.

Liabilities

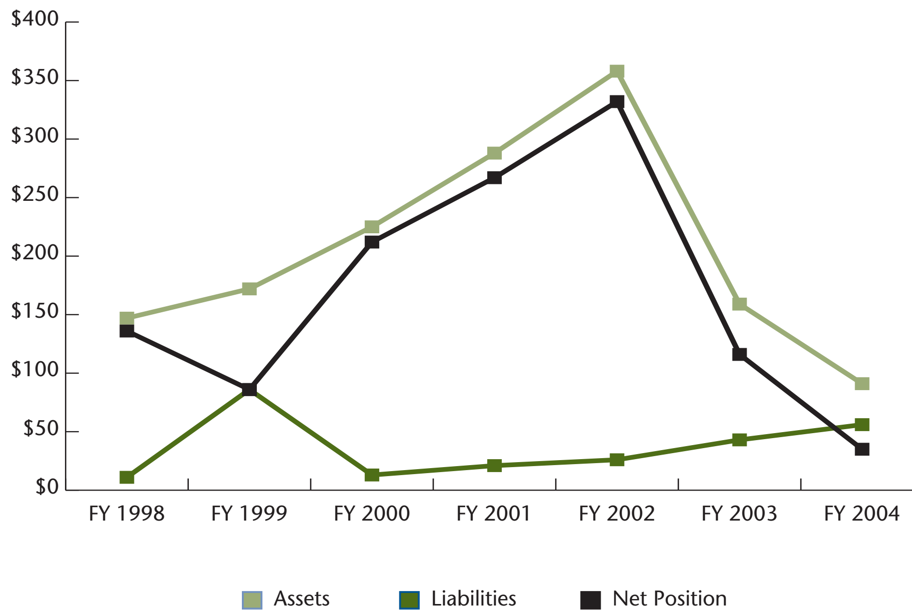
Liabilities represent funded and unfunded activities that require future budgetary resources. AHRQ's FY 2004 liabilities totaled $55.6 million, an increase of $12.6 million over FY 2003, and were equal to 61% of AHRQ's assets. The largest liability component was accounts payable at $19.0 million, followed by deferred revenue at $18.6 million, and accrued grants at $13.9 million. Accounts payable reflect funds owed by AHRQ predominantly for contracts and other services, deferred revenue represents funds collected by the Agency for future goods or services to be provided, and accrued grant liabilities indicates 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. Accrued grant liabilities exist because AHRQ grantees report expenses on a cash basis, while the financial statements are on an accrual basis. Deferred revenue comprised $7.3 million of the $12.6 million increase over FY 2003, and the largest component of deferred revenue is funds that were collected and deposited in AHRQ's no-year account late in FY 2004 but were not disbursed by the end of FY 2004.

FY 2004 Liabilities by Type



Net Position

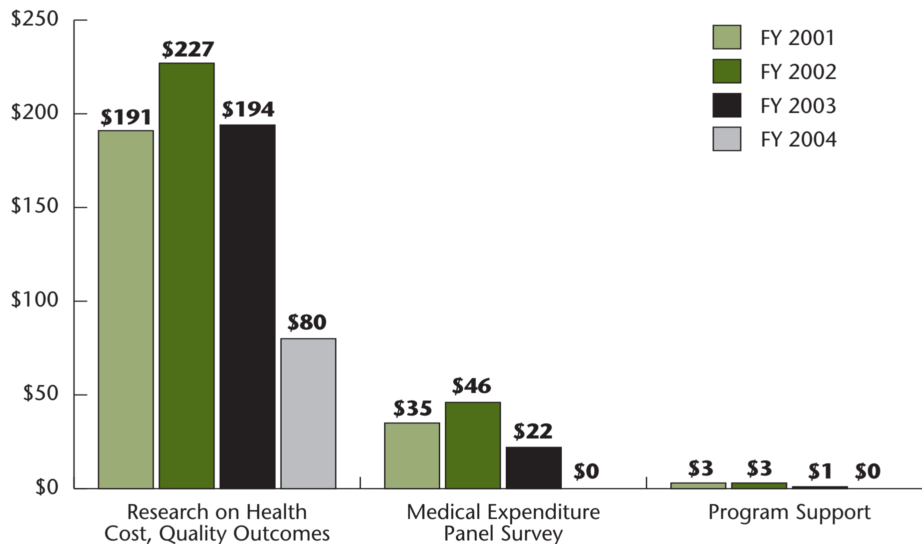
AHRQ's net position, which reflects the difference between assets and liabilities and signifies the Agency's financial condition, totaled $35.0 million in FY 2004, a decrease of $80.8 million from FY 2003. Net position is comprised of two categories: unexpended appropriations ($6.9 million)—the amount of authority granted by Congress that has been obligated but not expended, and cumulative results of operations ($28.1 million)—the net results of operations since inception plus the cumulative amount of prior period adjustments, if any. The downward change in net position since FY 2002 was driven primarily by a diminished Fund Balance with Treasury. As shown in following chart, AHRQ's net position parallels the Agency's assets, while liabilities have remained relatively steady during the past five years. The reduction in assets and net position are a byproduct of treating PHS Evaluation Funds as exchange revenue as opposed to non-exchange revenue, and collecting these funds as costs are incurred instead of in the same fiscal year the funds were allocated.



Consolidated Statement of Net Cost

The Consolidated Statement of Net Cost displays the amounts funded by sources other than exchange revenue, and the statement line items reflect AHRQ's major programs. Net costs are recognized when incurred, regardless of the year the money was appropriated. AHRQ's FY 2004 net cost of operations totaled $80.0 million: $320.5 million in gross costs less $240.5 million in earned revenues. The FY 2004 net cost of $80.0 million reflects a decrease of $136.8 million from the FY 2003 net cost of $216.8 million. AHRQ's net cost decreased because PHS Evaluation Funds, which are treated as exchange revenue, comprise a larger percentage of AHRQ's total resources available in FY 2004 than in previous fiscal years.

Net Costs by Category (Dollars in Millions)



Consolidated Statement of Changes in Net Position

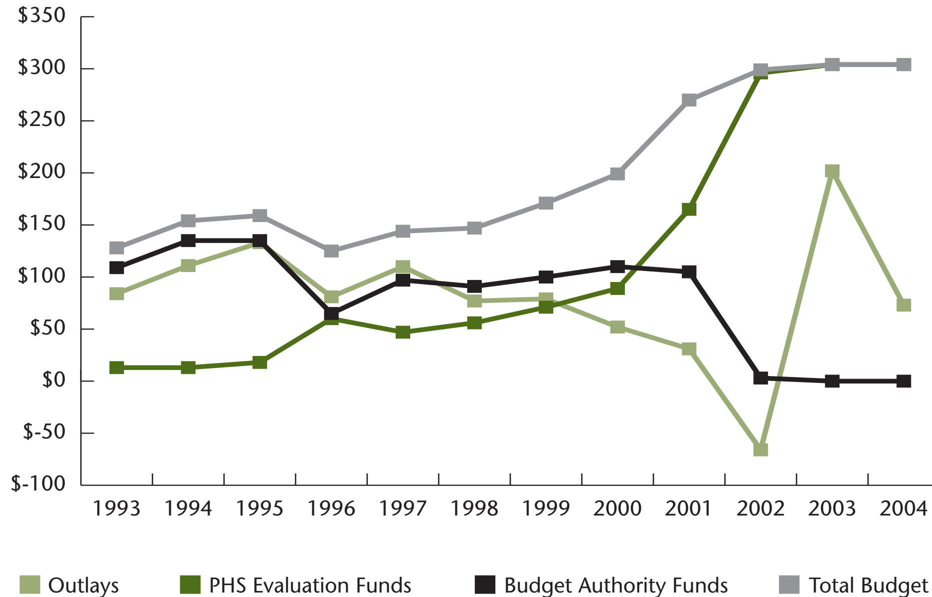
The Consolidated Statement of Changes in Net Position reflects the total financing sources available to AHRQ less the net cost of operations, as shown on the Consolidated Statement of Net Cost. Funds are categorized in one of two categories: cumulative results of operations—the net difference between the Agency's expenses and financing sources, or unexpended appropriations—appropriations provided to AHRQ that remained unpaid at the end of the fiscal year.

AHRQ ended FY 2004 with a consolidated net position of $35.0 million: $115.0 million in budgetary resources available ($108.1 million in cumulative results of operations and $6.9 million in unexpended appropriations) offset by $80.0 million in net cost of operations. The $35.0 million net position amount is $80.8 million less than AHRQ'S FY 2003 net position of $115.8 million. The reduction reflects the fact that starting in FY 2003 AHRQ is treating PHS Evaluation Funds as non-exchange revenue instead of exchange revenue.

Statement of Budgetary Resources

The Statement of Budgetary Resources focuses on: the funds available to AHRQ--appropriated and reimbursable funds, the status of those funds--obligated or unobligated, and the relationship between the funds available and the outlays--disbursements less collections. AHRQ's FY 2004 budgetary resources totaled $356.3 million, with most of the resources coming from spending authority from offsetting collections ($319.3 million), which includes PHS Evaluation Funds and reimbursable funds received from other Federal organizations. This statement shows that about 94 percent ($335.7 million) of the funds available to the Agency in FY 2004 were obligated. The majority of the unobligated funds reside in AHRQ's no year account, where funds remain available for obligation indefinitely until the objectives for which the funds were made available are achieved.

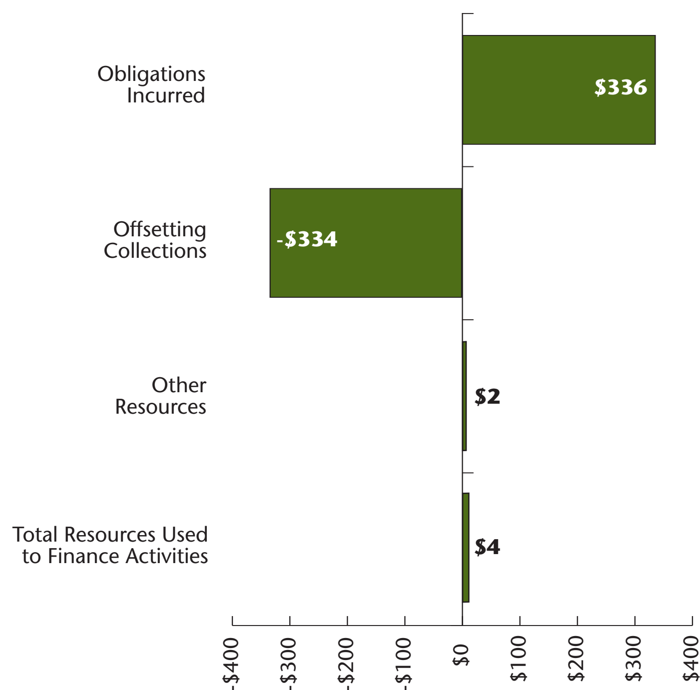
AHRQ's FY 2004 net outlays totaled $72.9 million: $318.9 million in disbursements less $246.0 million in collections. Because PHS Evaluation Funds are considered reimbursable funds, they are treated as collections and as such offset disbursements. As illustrated below, as the proportion of PHS Evaluation Funds to AHRQ's total budget steadily increased between FY 1998 and FY 2002, AHRQ's nets outlays decreased. In FY 2003 the new PHS Evaluation Funding billing policy was implemented. As a result, PHS Evaluation Funds received in a given fiscal year were collected primarily as costs were incurred as an alternative to being collected in a one-year period—the same fiscal year the funds were received. In FY 2003, AHRQ collected funds equal to actual disbursements and accruals for PHS Evaluation Funds appropriated in FY 2003 only, thus collections were lower than in past fiscal years, which resulted in a spike in net outlays. In FY 2004, AHRQ collected funds equal to actual disbursements and accruals for PHS Evaluation Funds appropriated in FY 2003 and in FY 2004, which increased collections and reduced net outlays. Starting in FY 2005 and in all subsequent fiscal years, AHRQ will collect PHS Evaluation Funds appropriated for three fiscal years in each fiscal year.



Consolidated Statement of Financing

This statement links proprietary and budgetary accounting information by reconciling budgetary resources with the net cost of operations. While the budgetary accounting system tracks resources and the status of those resources, the financial accounting system translates budgetary resources into financial statements on an accrual basis. Financial data based on accrued costs are essential to measuring performance and determining total financial resources needed to achieve a particular output or outcome. For FY 2004, AHRQ used $4.0 million to finance Agency activities, which represents obligations incurred and any other resources used to finance activities ($337.7 million), less spending from offsetting collections and recoveries ($333.7 million). AHRQ's offsetting collections principally consist of PHS Evaluation Funds.

FY 2004 Resources Used to Finance Activities



Other Performance Issues

President's Management Agenda

The goal of the President's Management Agenda (PMA) is to establish first rate financial management practices throughout the Federal government. The PMA, which was launched in August 2001, focuses on improving five management initiatives.

- Strategic Management of Human Capital
- Competitive Sourcing
- Improved Financial Management
- Expended Electronic Government
- Budget and Performance Integration

AHRQ continued as well as initiated many activities in FY 2004 to address these five initiatives, and will continue to expand upon these efforts in the coming years. A brief discussion of the PMA activities undertaken at AHRQ in FY 2004 follows.

Strategic Management of Human Capital

As part of the Department's revised 10 X 10 management objectives, AHRQ has begun to create a comprehensive succession plan. A review of the Agency's current programs and protocols reveals that AHRQ already participates in, and sponsors, a number of activities in support of succession planning. Many of the activities are focused on developing entry-level staff to be able to take on more responsibility and move up to a higher grade level. Other opportunities enable mid-level and senior-level staff to develop their skills and capabilities and move up to higher level positions and grades.

AHRQ succession planning efforts to date include:

- Coordinating a summer research intern program that provides opportunities for qualified undergraduate and graduate-level students in the health services research and policy areas. Interns are employed in entry-level positions for a two to four month period. Demand for this program is high; roughly 300-400 students apply for the 30-40 spots available each summer. Given this demand, AHRQ is able to choose the best students, and therefore the best potential job candidates for the future. Through this effort, the Agency hired several participants into full time positions after graduation.
- Continuing our efforts with the Kerr White Visiting Scholars Program. This program gives AHRQ an infusion of talent in junior, mid, and senior level positions by providing a research opportunity in which outside scholars are linked with key Agency research staff. Together, the partners address new and emerging issues related to health care access, utilization, cost, quality, and effectiveness. Under the guidelines of the program, both new and well-established scholars interact with AHRQ staff for periods ranging from 13 months to 2 years. The Agency has successfully hired five Kerr White Visiting Scholars since the inception of this program.
- Utilizing the Department's Emerging Leaders (EL) Program to recruit individuals who possess the talent and leadership potential to sustain and lead the Agency in attaining strategic goals and objectives in future years. To date, AHRQ has hired four Emerging Leaders. In 2003, AHRQ hired one individual under the public health path to support Agency efforts in the area of bio-terrorism and another under the information technology path to work with leading AHRQ researchers in the field of clinical informatics. The Agency also hired an Emerging Leader (EL) in 2004 to work with staff on creating an electronic grant administration and management process to support the E-Gov initiative. In addition to permanent EL positions, AHRQ hosted 10 rotational assignments in various flagship programs throughout the Agency. Plans are underway to hire another Emerging Leader in FY 2005 from the science path in the Center for Delivery Organization and Markets.
- Participating in the DHHS Career Mentoring Program, a formal mentoring program intended for employees in the GS-5 to GS-12 range who have up to five

years experience in DHHS. Participation in this program emphasizes personal and professional growth, and empowering employees with career goals and career progression while also assisting the Agency in cultivating and retaining a quality workforce. Currently, AHRQ has 10 mentor/mentee relationships under this program.

- Encouraging participation in the Council for Excellence in Government's "Excellence in Government Fellows" program. This program focuses on leadership development for mid-level Federal executives. Over the course of a year, during which Fellows remain in their fulltime jobs, the program concentrates on achieving results and delivering lessons about leadership. The program is designed to complement the core qualifications for members of the Senior Executive Service outlined by the Office of Personnel Management. AHRQ has taken advantage of this unique opportunity and has successfully supported seven individuals through the program, and an eighth has been selected. After completing the program, many participants have gone on to senior level positions at AHRQ including the Director, Center for Quality Improvement and Patient Safety (a flagship program); Director, Evidence-based Practice Centers program; and the Senior Advisor, Child Health.
- Participating in the Department's Senior Executive Service (SES) Candidate Development Program. The program is a comprehensive 6 to 18 month program designed to develop and enhance executive and leadership skills for GS-14 and GS-15 employees. In 2003, AHRQ supported two applications for the Program. Of the two candidates, one received an SES certification and is awaiting an SES "slot" while the other successfully competed and was selected for an SES position in AHRQ (prior to the completion of the program). In 2004, AHRQ supported the nomination of four employees; however, none were selected to participate. The Agency is incorporating lessons learned from the 2004 recruitment process and plans are underway to identify potential applicants for the 2005 class.

Over the next several months, AHRQ management will be working to evaluate existing succession planning activities, identify and refine competencies for executive leadership, and develop an overarching implementation strategy to "close the gaps" in current and projected competencies to develop a more uniformed and consistent succession plan for the Agency.

Workforce Restructuring/Delayering

As part of our workforce restructuring efforts and in order to comply with DHHS requirements to reduce administrative positions, AHRQ requested and recently received approval from the Office of Personnel Management to offer up to 25 Voluntary Separation Incentives (buyouts). The buyouts were offered to the following job categories and grade levels:

By the end of FY 2004, a total of seven employees took a Voluntary Separation Incentive.

Position Title	Occupational Series	Grade Level(s)
Miscellaneous Administration and Program Series	0301	GS-12/13/14/15
Miscellaneous Clerk and Assistant Series	0303	GS-05/06/07/08/09/10
Secretary Series	0318	GS-06/07/08
Management/Program Analysis Series	0343	GS-11/12/13/14/15
Technical Information Services series	1412	GS-09

In FY 2004, AHRQ was tasked with reducing its administrative staff by 12 positions. The following positions were eliminated and redeployed to support mission critical programs:

- Senior Advisor, GS-0301-15, Center for Outcomes and Evidence;
- Information Technology Specialist, GS-2210-14, Office of Performance, Accountability, Resources and Technology;
- Planning and Development Officer, GS-0301-15, Office of Performance, Accountability, Resources and Technology;
- Staff Assistant, GS-0303-09 Office of Performance, Accountability, Resources and Technology;
- Secretary, GS-0318-06, Center for Outcomes and Evidence;
- Office Automation Assistant, GS-0326-05, Center for Outcomes and Evidence;
- Office Automation Assistant, GS-0326-05, Office of Performance, Accountability, Resources and Technology.

Additionally, the Agency was granted a waiver for six positions deemed mission-support but due to the nature of the work, have been moved to mission-critical designations to help meet the established FY 2004 targets. With the seven positions that have been eliminated (along with the six waivers received from the Department) and the seven buyouts granted, the Agency exceeded its target. Efforts to reduce administrative management will continue in FY 2005.

Administrative Consolidation

Over the past year, the Agency took advantage of automation to streamline processes and increase efficiency where feasible. Examples include:

- Automating the annual OGE 450 (Confidential financial Disclosure Report) filing process. Instead of sending each employee a paper copy of the required memo and OGE-450, employees are notified via e-mail of the reporting requirements as well as the link to the on-line form and accompanying instructions. These improvements have reduced the staff time needed to create, collate, and disseminate the documents.
- AHRQ staff are systematically being trained on the "sign in" and "sign out" feature of the Integrated Time and Attendance System (ITAS) in lieu of the timekeepers performing this function. This change will allow employees greater control over the time and attendance reporting and will allow us to reduce the number of timekeepers from 14 to two.
- One hundred percent of Agency vacancies are now filled through the automated QuickHire staffing mechanism. This procedure change reduced the amount of paperwork generated for each announcement and also created a standardized approach to recruiting positions.
- AHRQ began deploying the Enterprise Human Resource and Payroll (EHRP) program to select Offices/Centers in AHRQ. This allows staff to independently generate documents (e.g. award nomination forms, SF-52s [Request for Personnel Action]) without having to contact either the Rockville Human Resources (HR) Center or program staff in OPART for HR-related information (e.g., position title, series, grade, salary, etc.).

Accountability

In 2004, all senior management officials, including the Director/Deputy Director, AHRQ, Center/Office Directors, and first line managers were placed on cascading performance plans. Additionally, where feasible, plans were cascaded throughout 85% of the Agency. The rating cycle for all employees was also changed from a calendar year to a fiscal year. Full implementation of the cascade approach will occur throughout the Agency in 2005. Training and technical assistance is again being provided by the Center for Organizational Excellence to ensure all plans are comprehensive and clearly articulate measurable goals and outcomes. Finally, with the proposed implementation of a DHHS Performance Management System in October, 2005, the Agency nominated two employees to serve on the steering committee to assist in the development of this policy and subsequent implementation in AHRQ.

Competitive Sourcing

Competitive sourcing is an examination of commercial activities to determine the most cost-effective and efficient method of acquisition. Commercial activities are defined as those activities resulting in a product or service that could be obtained

from the private sector. Competition results in cost savings to taxpayers while maintaining high quality service to the government.

The Agency conducted a clerical and administrative support streamlined cost comparison study (with Most Efficient Organization-MEO) in FY 2004, which involved 17 FTEs. The Agency won this competition and the clerical and administrative support functions will be retained in-house. Since the Agency accelerated its 2004 Competitive Sourcing plan (i.e., studied more than the required 12 positions), it was granted a "bye" for FY 2005. AHRQ has effectively established competitive sourcing as a routine management practice, and as a result, contributed to the Department's success in this arena. During the quarter that ended on March 31, 2004, the Department of Health and Human Services was one of only three Departments that met all the standards necessary to achieve "green" status for the Competitive Sourcing Initiative.

Improved Financial Management

American taxpayers have the right to know if their government is spending its resources appropriately. Are the proper programs being funded at the right levels? Are the accounting books in order? How much does it cost to run our programs? Are our methods and processes efficient? Do managers have access to accurate financial information so they can make informed budget decisions on a daily basis? To that end, the Improved Financial Management initiative asks agencies to evaluate their financial management capability to determine if sufficient internal controls are in place to safeguard against the misuse of Federal funds, and to ensure that the controls provide the accountability required to make certain funds are spent as intended. The specific goals of this initiative are to:

- Meet the accelerated November 15th deadline for audited financial statements.
- Receive a clean opinion on audited financial statements.
- Resolve auditor-identified and Integrity Act material weaknesses in internal controls.
- Ensure funds are disbursed in strict compliance with appropriation law.
- Integrate financial systems and provide timely and reliable financial information.
- Use financial and performance information routinely to make well-informed budget decisions.
- Substantially reduce erroneous payments.

Selected highlights of FY 2004 AHRQ accomplishments follow.

- Unified Financial Management System (UFMS). The Agency continued to support the development and implementation of the Department's UFMS. AHRQ has

members on the Steering Committee and the Planning and Development Committee, and also participates in meetings and serves on working groups for the PSC-serviced agencies. AHRQ staff participated in UFMS workshops that addressed a myriad of topics including project accounting of reimbursable agreements, process workflow documentation, and feeder systems conversion; reviewed deliverable documents; and worked with the UFMS Implementation Team to identify AHRQ-specific needs and requirements.

- Improper Payment Risk Assessment Plan. In accordance with the Improper Payment Act (IPIA) of 2002, AHRQ developed a risk assessment plan that looked at whether Agency grant, contract, and simplified acquisition activities are susceptible to significant erroneous payments. AHRQ's finding was that our programs were at low risk for incurring significant erroneous payments because of the many safeguards and controls in place. AHRQ continued to gather evidence of Agency improper payments encountered to pinpoint their exact nature. This evidence will be used to determine whether the errors are administrative in nature-user errors and to a lesser extent, system/process limitations-as opposed to the more consequential causes such as lack of internal controls, oversight, and/or monitoring; inadequate eligibility controls; and fraud, waste, and abuse. AHRQ management believes that of the elements critical to reducing improper payments, one of the most significant is instilling a culture of accountability from top management, to program managers, to project officers, to staff performing day-to-day operational activities. With that in mind, the Director sent an Agency-wide message to increase awareness that all AHRQ staff members are responsible for taking appropriate actions to reduce improper payments within the Agency, and to articulate the roles and responsibilities of each AHRQ employee as well as the mechanisms in place to measure and control these payments.
- Accelerated Financial Audit and Reporting Requirements. To meet the accelerated submission date for accountability reports and audited financial statements, AHRQ staff collaborated with the Department to identify, develop, and implement practical solutions. AHRQ participated in the Department's "top-down" audit, which consolidated several individual DHHS Agency audits into a single review process without sacrificing the integrity of the overall audit process. The Agency made it a priority to provide sound and timely information to the Department and to its auditors, thus facilitating the unqualified or "clean" opinion earned by the Department on its financial statements.
- Financial Systems. AHRQ continued to enhance its information systems and to develop new applications to create any Agency-wide enterprise financial network. The goal of this network is to improve access to relevant program and budgetary information so that decision-makers have accurate, timely, and useful information. In 2004, funding modules for contracts and interagency agreements were

integrated in the system. The long-range plan is to interface the AHRQ network with the Department's UFMS.

Expanded Electronic Government

The following outlines AHRQ's major activities regarding the integration and implementation of the President's Management Agenda (PMA) through e-Government technologies within the Agency. These include:

- Mature the AHRQ Capital Planning and Investment Control processes and ensure they are aligned with recent guidance from DHHS.
- Progress toward level three maturity with the AHRQ Enterprise Architecture Program.
- Improve IT Security and Privacy and ensure full compliance with the Federal Information Security Management Act of 2002.

In line with these program initiatives, AHRQ's Information Technology (IT) services team explicitly defined its mission and vision, buttressed by three strategic goals:

- Provide quality customer service and operations support to AHRQ's centers, offices and outside stakeholders.
- Ensure AHRQ's IT initiatives are aligned with Departmental and Agency enterprise architectures.
- Ensure AHRQ IT systems are fully Certified and Accredited for IT Security.
- Ongoing development of IT systems that link AHRQ's IT initiatives directly to the mission and performance goals of the Agency by developing an electronic planning system that allows selection and tracking of business investments (grants, contracts and intramural research), which link directly to the Agency mission and GPRA goals and budget performance.

AHRQ's FY 2004 accomplishments toward meeting the requirements set forth in the above laws follow IT Security Accomplishments

- AHRQ achieved 100% certification and accreditation of all IT systems
- The Agency achieved security training for 100 percent of its users during August of 2004.
- AHRQ worked with the DHHS IT Service Center to fully integrate locally supported applications into the DHHS ITSC service desk operations to provide a single point of contact for all IT related issues.

GPRA-Related Accomplishments

- Developed and put into production the first phases of the system to tightly link budget and performance through the implementation of the Funding Decision Support System.

Enterprise Architecture Accomplishments

- AHRQ has been a full participant with the DHHS Enterprise Architecture efforts and is on track to meet the maturity goals for the AHRQ Enterprise Architecture program.
- AHRQ developed a full project plan for deriving direct institutional value from a robust and integrated enterprise architecture program. The program will link with the capital planning and investment control and IT governance process to provide the best possible management structure for both internal IT projects and external IT initiatives funded through contracts.

PMA e-Government Activities

AHRQ is quite active in many DHHS PMA e-Government programs. AHRQ personnel are serving as team members on several DHHS cross-cutting projects, the DHHS Enterprise Architecture Team, the DHHS Public Key Infrastructure team, the DHHS Enterprise E-mail team, and the DHHS Portfolio management team.

Other IT Activities

In addition to the strategic goals in support of the Agency mission, the IT services team's function is to support AHRQ business operations through the effective and efficient application of IT products and services. Accompanying this mission is the vision of providing timely access to reliable and secure information that supports the business operations of the Agency, serving as a model for best practices in IT management throughout DHHS.

The AHRQ IT services team is working to fully develop a process and project oriented planning template that will fully automate management processes across a wide spectrum of administrative activities within the Agency. One example would be linking the small purchase credit card request and approval process into the system being developed, making it clear what Agency policy requires, and what the steps in the approval process are to all involved. This approach will be used to fully automate access to Agency administrative processes and policy in 2005. 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.

Budget and Performance Integration

General program direction and budget and performance integration is accomplished through the collaboration of the Office of the Director and offices and centers that have programmatic responsibility for portions of the Agency's research portfolios.

As a result of the increase emphasis on strategic planning, the Agency shifted from a focus on output and process measurement to a focus on outcome measures. These outcome measures are being developed to cascade down from our strategic goal areas of safety/quality, effectiveness, efficiency, and organizational excellence. Portfolios of work—combinations of activities that make up the bulk of our investments—support the achievement of our highest level outcomes.

In continuing AHRQ's commitment to budget and performance integration, we reorganized the management structure to align those responsible for budget formulation, execution, and providing services and guidance in all aspects of financial management with those responsible for planning, performance measurement, and evaluation. These functions are now within one office.

Current and future efforts include continuing the development of a software application that maps each AHRQ funded activity to the strategic plan goal area and portfolio structure. This is a work in progress and we look forward to sharing our success as we continue this journey.

Finally, AHRQ completed comprehensive program assessments on six key programs within the Agency: The Medical Expenditure Panel Survey (MEPS); the Healthcare Cost and Utilization Project (HCUP); the Consumer Assessment of Health Plans Study (CAHPS); the grant component of the Agency's Translation of Research into Practice (TRIP) program, Patient Safety, and Pharmaceutical Outcomes. Over the next few years, the Agency will focus on fully integrating financial management of our programs with their performance.

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 the agency mission.
- Program 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 decision making.

In accordance with the Act, AHRQ implemented a streamlined Management Accountability and Control Program (MACP) that uses periodic reviews, audits, and studies to meet the aforementioned management control goals. This program integrates efforts to meet the requirements of FMFIA with other Agency efforts to improve effectiveness and accountability. Based upon an evaluation of these activities, the Agency did not identify any high-risk areas, critical weaknesses, or non-conformances in FY 2004. AHRQ also does not have any financial systems as defined by FMFIA.

A representative sample of FMFIA activities undertaken in FY 2004 are outlined below.

- AHRQ has been engaged in strategic workforce planning to ensure highly educated, adaptable staff are recruited to replace current employees lost through attrition. Progress to date includes:
  - Focusing efforts on recruiting professional, mission-critical staff to create a more balanced and efficient organization to support and conduct health services research and support flagship research programs.
  - Hiring two Emerging Leaders from the 2003 class. One individual was hired under the public health path to support Agency efforts in the area of bioterrorism and the other was hired from the information technology path and works with leading AHRQ researchers in the field of clinical informatics.
  - Expanding the number of applicants selected to participate in the AHRQ summer intern program. This is an opportunity for the Agency to infuse new talent into programs and activities.
  - Working with DHHS to develop an Agency brochure which emphasizes the "One Department" philosophy but still articulates AHRQ's contributions to health services research. This will be used at national meetings, job fairs, college/university recruitments, and other venues.
  - Implementing the use of "Quick Hire" for a majority of the Agency's recruitments to streamline the process and reduce the amount of time it takes to fill critical vacancies.
- In order to support Departmental efforts with administrative consolidation, AHRQ transferred one position to the Program Support Center (PSC) to support the Small OPDIV IT consolidation efforts. The Agency is also evaluating current administrative practices and protocols in an effort to streamline, improve efficiency and eliminate waste and redundancy. Thus far, the Agency has been successful in eliminating twelve administrative support positions this year (through buyout authority, attrition and reprogramming of positions to support programmatic activities).
- AHRQ established performance contracts for the Agency Director and all senior management officials. First line supervisors were also placed on cascading performance plans which link to their respective Office/Center Director.

Additionally, the Agency is working to “cascade” throughout certain organizations (where feasible) with full implementation to the general workforce beginning in FY 2005.

- AHRQ staff participated in its second financial statement audit, and responded to the auditors’ requests with accurate information and in a timely manner in all cases. The Agency provided the auditors with a multitude of material, responded to numerous questionnaires, and provided answers to the auditors’ questions for items such as sensitive payment issues, Agency policies and procedures, and random samples pulled for audit.
- AHRQ staff took part in the DHHS workgroup to implement a Department-wide recovery audit program as mandated in Section 831 of the FY 2002 Defense Authorization Act.
- AHRQ continued to support the Department’s efforts to develop and implement UFMS by participating in the Steering Committee and the Planning and Development Committee meetings. The back-end of AHRQ’s Budget Database system was converted to Oracle to improve the database’s security and make interfacing with other Agency and Department systems more efficient.

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

Financial Statements

U.S. Department of Health and Human Services
Agency for Healthcare Research and Quality
CONSOLIDATED BALANCE SHEET
As of September 30, 2004 and 2003
(in thousands)

ASSETS	9/30/04	9/30/03
Intragovernmental		
Fund Balance with Treasury (Notes 1 & 2))	82,071	153,866
Investments, Net (Note 1)	–	–
Accounts Receivable, Net (Notes 1 & 3)	7,736	4,545
Other	363	–
Total Intragovernmental	90,170	158,411
General Property, Plant & Equipment, Net (Notes 1 & 4)	385	325
Other (Note 11)	–	–
TOTAL ASSETS	90,555	158,736
LIABILITIES		
Intragovernmental		
Accounts Payable (Notes 1 and 6)	6,154	2,544
Accrued Payroll and Benefits (Notes 1 and 6)	243	396
Deferred Revenue (Note 6)	18,626	11,320
Total Intragovernmental	25,023	14,260
Accounts Payable (Notes 1 and 6)	12,808	10,738
Accrued Grant Liability (Notes 1 & 5)	13,927	14,708
Actuarial FECA Liability (Notes 1 and 6)	548	569
Accrued Payroll and Benefits (Notes 1 and 6)	3,289	2,689
TOTAL LIABILITIES	55,595	42,964
NET POSITION		
Unexpended Appropriations	6,908	9,867
Cumulative Results of Operations	28,052	105,905
TOTAL NET POSITION	34,960	115,772
TOTAL LIABILITIES & NET POSITION	90,555	58,736

The accompanying notes are an integral part of these statements

U.S. Department of Health and Human Services
Agency for Healthcare Research and Quality
GROSS COST AND EXCHANGE REVENUE
For the Year Ending September 30, 2004
(in thousands)

	Intragovernmental		
	Gross Cost		
	Combined	Eliminations	Consolidated
Program			
Research on Health Cost, Quality and Outcomes	26,362	–	26,362
Medical Expenditure Panel Survey	8,200	–	8,200
Program Support	451	–	451
OPDIV Totals	35,013	–	35,013

The accompanying notes are an integral part of these statements.

U.S. Department of Health and Human Services
Agency for Healthcare Research and Quality
GROSS COST AND EXCHANGE REVENUE
For the Year Ending September 30, 2004
(in thousands)

	Intragovernmental		
	Less: Exchange Revenue		
	Combined	Eliminations	Consolidated
Program			
Research on Health Cost, Quality and Outcomes	189,044	–	189.044
Medical Expenditure Panel Survey	48,798	–	48,798
Program Support	2,667	–	2,667
OPDIV Totals	240,509	–	240,509

The accompanying notes are an integral part of these statements.

U.S. Department of Health and Human Services
Agency for Healthcare Research and Quality
GROSS COST AND EXCHANGE REVENUE
For the Year Ending September 30, 2004
(in thousands)

	With the Public		
	Less: Exchange Revenue		
	Gross Cost	Revenue	Consolidated Net Cost of Operations
Program			
Research on Health Cost, Quality and Outcomes	242,699	–	79,987
Medical Expenditure Panel Survey	40,598	–	–
Program Support	2,216	–	–
OPDIV Totals	285,483	–	79,987

The accompanying notes are an integral part of these statements.

U.S. Department of Health and Human Services
Agency for Healthcare Research and Quality
CONSOLIDATED STATEMENT OF CHANGES IN NET POSITION
For Fiscal Years Ending September 30, 2004 and 2003
(in thousands)

	2004 Cumulative Results of Operations	2004 Unexpended Appropriations	2004 Consolidated Totals	2003 Consolidated Totals
Beginning Balances (10/1/03 & 10/1/02)	$105,905	$9,867	$115,772	$331,803
Prior period adjustments (+/-)	–	–	–	–
Beginning Balances (10/1/03 & 10/1/02), as adjusted	105,905	9,867	115,772	331,803
Budgetary Resources:				
Appropriations received		–	–	–
Appropriations transferred-in/out (+/-)		–	–	–
Other adjustments (rescissions, etc) (+/-)	–	(2,875)	(2,875)	(1,150)
Appropriations used	84	(84)	–	–
Nonexchange revenue			–	–
Donations and forfeitures of cash and cash equivalents	26		26	102
Transfers-in/out without reimbursement (+/-)	–		–	–
Other budgetary financing resources (+/-)	–		–	–
Non-Budgetary Resources:				
Donations and forfeitures of property	–		–	–
Transfers-in/out without reimbursement (+/-)	–		–	–
Imputed financing from costs absorbed by others	2,024		2,024	1,767
Other non-budgetary financing resources (+/-)	–		–	–
Total Financing Sources	2,134	(2,959)	(825)	719
Net Cost of Operations (+/-)	79,987		79,987	216,750
Ending Balances	$28,052	$6,908	$34,960	$115,772

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 BUDGETARY RESOURCES
For the Fiscal Years Ending September 30, 2004 and 2003
(in thousands)

	2004 Combined Total	2003 Combined Total
Budgetary Resources:		
1. Budget Authority		
1A. Appropriations received	–	–
1B. Borrowing authority	–	–
1C. Contract authority	–	–
1D. Net transfers (+/-)	–	–
1E. Other	25	100
2. Unobligated Balances – Beginning of period		
2A. Beginning of Period	25,406	22,737
2B. Net transfers, actual (+/-)	–	–
2C. Anticipated transfers balances (+/-)	–	–
3. Spending Authority from Offsetting Collections		
3A. Earned		
1. Collected	316,144	298,011
2. Receivable from Federal sources	3,190	4,545
3B. Change in unfilled customer orders		
1. Advance received	(64,721)	(188,249)
2. Without advance from Federal sources	76,267	218,149
3C. Anticipated for rest of year, without advances	–	–
3D. Transfers from trust funds	–	–
3E. Subtotal	330,880	332,456
4. Recoveries of Prior Year Obligations		
4A. Actual	2,874	939
4B. Anticipated	–	–
5. Temporarily not available pursuant to Public Law	–	–
6. Permanently not available (-)	(2,874)	(1,156)
7. Total Budgetary Resources	356,311	355,076
Status of Budgetary Resources:		
8. Obligations Incurred		
8A. Direct	1,818	(2,569)
8B. Reimbursable	333,885	332,239
8C. Subtotal	335,703	329,670

continued

COMBINED STATEMENT OF BUDGETARY RESOURCES *(continued)*

9. Unobligated Balances - Available		
9A. Apportioned	16,384	22,519
9B. Exempt from apportionment	25	100
9C. Other available	–	–
10. Unobligated Balances - Not Available	4,199	2,787
11. Total Status of Budgetary Resources	356,311	355,076
Relationship of Obligations to Outlays:		
12. Obligated Balance, Net – Beginning of Period	136,128	341,939
13. Obligated Balance Transferred, Net (+/-)	–	–
14. Obligated Balance, Net – End of Period		
14A. Accounts receivable (-)	(7,736)	(4,545)
14B. Unfilled customer orders from Federal sources	(295,216)	(218,949)
14C. Undelivered orders	334,025	345,463
14D. Accounts payable	34,106	14,159
15. Outlays		
15A. Disbursements	318,969	312,208
15B. Collections (-)	(246,071)	(110,122)
15C. Subtotal	72,898	202,086
16. Less: Offsetting receipts	–	–
17. Net Outlays	72,898	202,086

The accompanying notes are an integral part of these statements.

U.S. Department of Health and Human Services
Agency for Healthcare Research and Quality
CONSOLIDATED STATEMENT OF FINANCING
For the Fiscal Years Ending September 30, 2004 and 2003
(in thousands)

	2004 Consolidated Total	2003 Consolidated Total
Resources Used to Finance Activities:		
Budgetary Resources Obligated		
Obligations Incurred	$335,703	$329,670
Less: Spending Authority from Offsetting Collections and Recoveries	333,754	333,395
Obligations Net of Offsetting Collections and Recoveries	1,949	(3,725)
Less: Offsetting Receipts	–	–
Net Obligations	1,949	(3,725)
Non-Budgetary Resources		
Imputed Financing From Costs Absorbed by Others	2,024	1,767
Net Non-Budgetary Resources Used to Finance Activities	2,024	1,767
Total Resources Used to Finance Activities	3,973	(1,958)
Resources Used to Finance Items Not Part of the Net Cost of Operations		
Change in Budgetary Resources Obligated for Goods, Services, and Benefits Ordered but Not Yet Provided	5,460	(23,044)
Budgetary Offsetting Collections and Receipts That Do Not Affect Net Cost of Operations		
Other Budgetary Collection and Receipts	26	102
Resources That Finance the Acquisition of Assets or Liquidation of Liabilities	–	–
Other Resources or Adjustments to Net Obligated Resources That Do Not Affect Net Cost of Operations	(78,145)	(201,904)
Total Resources Used to Finance Items Not Part of the Net Cost of Operations	(72,659)	(224,846)
Total Resources Used to Finance the Net Cost of Operations	76,632	222,888
Components of Net Cost of Operations That Will Not Require or Generate Resources in the Current Period		
Components Requiring or Generating Resources in Future Periods:		
Increase in Annual Leave Liability	107	–
Total Components of Net Cost of Operations That Will Require or Generate Resources in Future Periods	107	–

continued

CONSOLIDATED STATEMENT OF FINANCING *(continued)*

Components Not Requiring or Generating Resources:		
Depreciation and Amortization	164	76
Losses or (Gains) from Revaluation of Assets and Liabilities	–	–
Other	3,084	(6,214)
Total Components of Net Cost of Operations That Will Not Require or Generate Resources	3,248	(6,138)
Total Components of Net Cost of Operations That Will Not Require or Generate Resources in the Current Period	3,355	(6,138)
Net Cost of Operations	$79,987	$216,750

The accompanying notes are an integral part of these statements.

U.S. Department of Health and Human Services
Agency for Healthcare Research and Quality
Notes to the Principal Financial Statements
For the Fiscal Years Ending September 30, 2004 and 2003
(in thousands)

Note 1. Significant Accounting Policies

Reporting Entity

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. 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 promote health care quality improvement by conducting and supporting health services research that develops and presents scientific evidence regarding all aspects of health care. AHRQ is structured into the following nine major functions.

- Office of the Director
- Office of Performance Accountability, Resources, and Technology
- Office of Extramural Research, Education, and Priority Populations
- Office of Communications and Knowledge Transfer
- Center for Delivery, Organization, and Markets
- Center for Financing, Access, and Cost Trends
- Center for Outcomes and Evidence
- Center for Primary Care, Prevention, and Clinical Partnerships
- Center for Quality Improvement and Patient Safety

The Office of HHS' 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 appropriated funds and a small trust fund. The appropriated accounts may include 1-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, which are considered a health

research and training function. AHRQ's programs are designated by OMB as falling under the health budget function category.

Appropriations

75X1700	Agency for Healthcare Research and Quality—No Year Fund
75 1700	Agency for Healthcare Research and Quality
75X8512	Agency for Healthcare Research and Quality—Gift Fund

Basis of Accounting and Presentation

The financial statements of the Agency for Healthcare Research and Quality have been prepared to report the financial position and results of operations of HHS, pursuant to the requirements of 31 U.S.C. 351 (b), the Chief Financial Officers Act of 1990 (P.L. 101-576), as amended by the Reports Consolidation Act of 2000 (P.L. 106-531). They have been prepared from Departmental records in accordance with the form and content guidance of the Office of Management and Budget (OMB) Bulletin 01-09 and generally accepted accounting principles (GAAP) for the Federal government as prescribed by the Federal Accounting Standards Advisory Board (FASAB) and recognized by the American Institute of Certified Public Accountants (AICPA). These statements are therefore different from financial reports prepared pursuant to other OMB directives that are primarily used to monitor and control HHS' use of budgetary resources.

AHRQ uses both the accrual basis and budgetary basis of accounting to record transactions. Under the accrual method of accounting, revenues are recognized when earned, and expenses are recognized when incurred, without regard to receipt or payment of cash. The budgetary accounting principles, on the other hand, are designed to recognize the obligation of funds according to legal requirements, which in many cases is prior to the occurrence of an accrual-based transaction. The recognition of budgetary accounting transactions is essential for compliance with legal constraints and controls over the use of Federal funds. AHRQ also uses the cash basis of accounting for some programs with an accrual adjustment made by recording year-end estimates of unpaid liabilities.

Entity and Non-Entity Assets

Entity assets are assets that the reporting entity has authority to use in its operations. The authority to use funds in an entity's operations means entity management has the authority to decide how funds are used or management is legally obligated to use funds to meet entity obligations. Non-entity assets are held by the entity but are not available to the entity.

The financial statements do not report entity and non-entity assets separately on the face of the statement. The entity /non-entity, if any, would be detailed in Notes.

Fund Balance with Treasury

AHRQ maintains its available funds with the U.S. Department of the Treasury (Treasury). "Fund Balance with Treasury" includes appropriated, revolving, and trust funds available to pay current liabilities and finance authorized purchases, as well as funds restricted until future appropriations are received. Cash receipts and disbursements are processed by Treasury, and HHS' records are reconciled with those of Treasury on a regular basis. Note 2 provides additional information.

Investments

Trust fund balances are investments (plus the accrued interest on investments) held by Treasury. Federal law requires that trust fund investments that are not necessary to meet current expenditures be invested in "interest-bearing obligations of the United States or in obligations guaranteed as to both principal and interest by the United States."

Accounts Receivable, Net

Accounts Receivable consists of amounts owed to AHRQ by other federal agencies and by the public. Intragovernmental accounts receivable arise generally from the provision of goods and services to other federal agencies and are considered to be fully collectible. Amounts due from the public are presented net of an allowance for loss on uncollectible accounts. The allowance for loss is established based on past collection experience and/or an analysis of the outstanding balances. Accounts receivable also includes interest due to HHS that is directly attributable to delinquent accounts receivable. Note 3 provides additional information on Accounts Receivable.

Advances to Grantees/Accrued Grant Liability

Advances to Grantees are cash outlays made by AHRQ to its grantees. An accrued grant liability occurs when the year-end grant accrual for AHRQ exceeds advances to grantees outstanding at year-end. Progress payments on work in process are not included in grants. AHRQ grants programs are classified as "Programs Subject to the Expense Accrual." For programs subject to the accrual, grantees draw funds (recorded as Advances to Grantees in HHS' accounting systems) as bills or salary payments come due. The grantees report actual disbursements quarterly and the amounts are recorded as an expense and a reduction to the advance balance in the accounting systems. At year-end, AHRQ uses actual grant payments when these data are available. When the data are not available, HHS employs a process to estimate the year-end grant accrual based on historical spending patterns to predict unreported grantee expenditures. The year-end accrual for these non-block grants equals the estimate of fourth quarter disbursements, plus an average of 2 weeks expenditures for expenses incurred prior to cash drawdowns. Note 5 provides additional information on Advances to Grantees/Accrued Grant Liability.

General Property, Plant and Equipment, Net

General Property, Plant and Equipment (PP&E) consists of buildings, structures and facilities used for general operations; land acquired for general operating purposes; vehicles; and construction-in-progress. Other property consists of internal use software. The basis for recording purchased PP&E is full cost, which includes all costs incurred to bring the PP&E to a form and location suitable for its intended use. The cost of PP&E acquired under a capital lease is the amount recognized as a liability for the capital lease at its inception. The cost of PP&E acquired through donation is the estimated fair value when acquired. The cost of PP&E transferred from other federal entities is the net book value of the transferring entity. All PP&E with an initial acquisition cost of $25,000 or more and an estimated useful life of 2 years or greater are capitalized.

PP&E are depreciated using the straight-line method over the estimated useful life of the asset. Land and land rights, including permanent improvements, are not depreciated. Normal maintenance and repair costs are expensed as incurred.

The capitalization threshold for internal use software costs for appropriated fund accounts is $1,000,000 or above. The capitalization threshold for internal use software for revolving funds is $500,000. Costs below the threshold levels are expensed. The software is depreciated for a period of time consistent with the estimated useful life used for planning and acquisition purposes. Note 4 provides additional information on general purpose property, plant and equipment.

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. Payments of all liabilities other than contracts can be abrogated by the sovereign entity.

Liabilities Covered by Budgetary Resources are those liabilities funded by available budgetary resources including: (1) new budget authority, (2) spending authority from offsetting collections, (3) recoveries of unexpired budget authority, (4) unobligated balances of budgetary resources at the beginning of the year, and (5) permanent indefinite appropriation or borrowing authority.

Liabilities Not Covered by Budgetary Resources are incurred when funding has not yet been made available through Congressional appropriations or current earnings. AHRQ recognizes liabilities for employee annual leave earned but not taken, and amounts billed by the Department of Labor for Federal Employees Compensation Act (FECA) disability payments. Also included in this category is the actuarial FECA liability determined by Labor but not yet billed. For HHS revolving funds, all liabilities are funded as they occur.

Liabilities Covered by Budgetary Resources and Liabilities Not Covered by Budgetary Resources are combined on the balance sheet. Note 6 provides additional information.

Accounts Payable

Accounts Payable consists of amounts due for goods and services received, progress in contract performance, interest due on accounts payable, and other miscellaneous payables. Note 6 provides additional information.

Accrued Payroll and Benefits

Annual leave is accrued as it is earned by employees and is included in personnel compensation and benefit costs. An unfunded liability is recognized for earned but unused annual leave, since from a budgetary standpoint, this annual leave will be paid from future appropriations when the leave is used by employees. Rather than from the amount which had been appropriated to AHRQ as of the date of the financial statements. The amount of accrued annual leave is based upon current pay of the employees. Sick leave and other types of leave are expensed when used and not future liability is recognized for these amounts. Note 6 provides additional information.

Federal Employee and Veterans' Benefits

Federal Employee and Veterans' Benefits consist of the actuarial portions of future benefits earned by Federal employees and veterans, but not yet due and payable. These benefits include pensions, other retirement benefits, and other post-employment benefits. These benefits are normally administered by the Office of Personnel Management (OPM) and not by the Department of Health and Human Services, or any of the individual operating divisions of the Department. Therefore, AHRQ does not recognize any liability in the balance sheet for pensions, other retirement benefits, and other post-employment benefits. HHS does, however, recognize the imputed cost and imputed financing related to these benefits in the Consolidated Statement of Net Cost and the Consolidated Statement of Changes in Net Position.

Revenue and Financing Sources

The United States Constitution prescribes that no money may be expended by a Federal agency unless and until funds have been made available by congressional appropriation. Thus, the existence of all financing sources is dependent upon congressional appropriation.

Appropriations. AHRQ's operating funds are appropriated by the Congress to the Department from the general receipts of the Treasury. These funds are made available to AHRQ for a specified time period, usually 1 fiscal year, multiple fiscal years, or indefinitely, depending upon the intended use of the funds. For example, funds for general operations are generally made available for 1 fiscal year; funds for long-term projects such as major construction will be available to the Department for the

expected life of the project; and funds used to establish revolving fund operations are generally available indefinitely (i.e., no year funds). The Statement of Budgetary Resources presents information about the resources appropriated to AHRQ.

Exchange and Non-Exchange Revenue. AHRQ revenue is classified as either exchange revenue or non-exchange revenue. Exchange revenues are those that derive from transactions in which both the government and the other party receive value, including reimbursements for services performed for other Federal agencies and the public and other sales of goods and services. These revenues are presented on AHRQ's Consolidated Statement of Net Cost and reduce the cost of operations borne by the taxpayer. Non-exchange revenues result from donations to the government and from the government's sovereign right to demand payment, including taxes. Non-exchange revenues are not considered to reduce the cost of AHRQ's operations and are reported on the Consolidated Statement of Changes in Net Position.

With minor exceptions, all receipts of revenues by Federal agencies are processed through the Department of the Treasury central accounting system. Regardless of whether they derive from exchange or non-exchange transactions, all receipts that are not earmarked by congressional appropriation for immediate departmental use are deposited in the general or special funds of the Treasury. Amounts not retained for use by the Department are reported as transfers to other government agencies on the HHS Statement of Changes in Net Position.

Imputed Financing Sources. In certain instances, operating costs of HHS are paid out of funds appropriated to other Federal agencies. For example, by low the Office of Personnel Management pays certain costs of retirement programs, and certain legal judgments against HHS or it operating divisions are paid from the Judgment Fund maintained by Treasury. When costs that are identifiable to AHRQ and directly attributable to AHRQ's operations are paid by other agencies, the AHRQ recognizes these amounts as operating expenses of HHS. In addition, AHRQ recognizes an imputed financing source on the Consolidated Statement of Changes in Net Positions to indicate the funding of their operations by other Federal agencies.

Contingencies

A contingency is an existing condition, situation, or set of circumstances involving uncertainty as to possible gain or loss to AHRQ. 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 than likely than not, and the related future outflow or sacrifice of resources is likely and measurable.

Use of Estimates in Preparing Financial Statements

Preparation of financial statements in accordance with Federal accounting standards requires AHRQ to make estimates and assumptions that affect the reported amounts of assets and liabilities, and disclosure of contingent liabilities, as of the date of the financial statements. Estimates and assumptions also affect the revenues and expenses accrued and reported in the financial statements. Actual results may differ from those estimates.

Intragovernmental Relationships and Transactions

In the course of its operations, AHRQ has relationships and enters into financial transactions with numerous Federal agencies. The more prominent of these is the National Institutes of Health.

Note 2. Fund Balance with Treasury

AHRQ's undisbursed account balances at September 30, 2004 and 2003 are listed below by fund type. Other funds include balances in deposit, suspense, clearing, and related non-spending accounts.

A. Fund Balance:

	2004			2003		
	Entity Assets	**Non-Entity Assets**	**Total**	**Non-Entity Assets**	**Assets**	**Total**
Appropriated	80,667	–	80,667	152,325	–	152,325
Trust Funds	1,404	–	1,404	1,541	–	1,541
Total	**82,071**	**–**	**82,071**	**153,866**	**–**	**153,866**

B. Status of Fund Balance with Treasury

	2004	2003
Unexpended Appropriations:		
Unobligated-Available	16,409	22,619
Unobligated-Unavailable	4,199	2,787
Obligated Balance not yet Disbursed	61,463	128,460
Total	**82,071**	**153,866**

Note 3. Accounts Receivable, Net

AHRQ's accounts receivable as of September 30, 2004 and 2003 are summarized below. AHRQ has no non-entity receivables.

	Accounts Receivable, Principal	Interest Receivable	Accounts Receivable, Gross	Allowance	Net, Receivables, Combined
2004					
Intergovernmental					
Entity	7,737	–	7,736	–	7,736
Non-Entity	–	–	–	–	–
Total, Intragovernmental	7,736	–	7,736	–	7,736
2003					
Intergovernmental					
Entity	4,545	–	4,545	–	4,545
Non-Entity	–	–	–	–	–
Total, Intragovernmental	4,545	–	4,545	–	4,545

Note 4. General Property, Plant and Equipment, Net

The building occupied by AHRQ is provided by the General Services Administration (GSA). GSA charges AHRQ a Standard Level Users Charge (SLUC), which approximates commercial rental rates for similar properties. Major categories of AHRQ General Property, Plant and Equipment (PP&E) as of September 30, 2004 and 2003 are listed below.

					2004	2003
	Depreciation Method	Est. Useful Lives	Acquisition Cost	Accumulated Depreciation	Net Book Value	Net Book Value
Equipment	Straight Line	3-20 yrs	595	(430)	165	325
Internal Use Software	Straight Line	various	220		220	0

Note 5. Accrued Grant Liability

Grant advances are liquidated upon the grantee's reporting of expenditures on the quarterly SF-272 report (Federal Cash Transaction Report). In many cases, HHS receives these reports several months after the grantee actually incurs the expense, resulting in an understated grant expense in the financial statements. To mitigate this, HHS developed Department-wide procedures to estimate and accrue amounts due grantees for their expenses, both realized and accrued, through September 30, 2004 and 2003.

At fiscal year-end, when OPDIVs record the estimated accrual for amounts due to grantees for their expenses, if the amount of outstanding advances exceeds the amount of the accrual, the OPDIV reports an asset for "Advances to Grantees." Otherwise, the OPDIV reports a liability called "Accrued Grant Liability" equal to the amount that the accrual exceeds the outstanding advances. For additional information on this subject, see Note 1 under "Advances to Grantees/Accrued Grant Liability."

	2003	**2004**
Grant Advances Outstanding Before Grant Accrual	$41,215	$32,475
Less: Estimated Amount Due to Grantees	(27,288)	(47,183)
Net Grant Advances	$(13,927)	$(14,708)

Note 6. Other Liabilities

Deferred revenue is for the provision of goods and services. AHRQ deferred revenues primarily relates to services agreed to in interagency agreements.

Workers' compensation benefits are the actuarial liability for future workers' compensation benefits that includes the expected liability for death, disability, medical and miscellaneous cost for approved compensation cases. The liability utilizes historical benefit payment patterns related to a specific incurred period. Consistent with past practices, these projected annual benefit payments have been discounted to present value using the OMB's economic assumptions for 10-year Treasury notes and bonds. The interest rate assumptions utilized for discounting in FY 2004 and FY 2003 appear below.

FY 2004	**FY 2003**
4.883% in Year 1	3.840% in Year 1
5.235% in Year 2 and thereafter	4.850% in Year 2 and thereafter

To provide more specifically for the effect of inflation on the liability for future workers' compensation benefits, wage inflation factors (cost of living adjustments or COLAs), and medical inflation factors (consumer price index medical or CPIMs) are applied to the calculations of projected future benefits. These factors are also used to adjust historical payments to current year dollars. The compensation COLAs and CPIMs used in projections are as follows:

FY	COLA	CPIM
2005	2.03%	4.14%
2006	2.73%	3.96%
2007	2.40%	3.98%
2008	2.40%	3.99%
2009+	2.40%	4.02%

The table below summarizes other liabilities and whether they are covered by budgetary resources.

	Intragovernmental Liabilities			With the Public		
	Covered by Budgetary Resources	Not Covered by Budgetary Resources	Total	Covered by Budgetary Resources	Not Covered by Budgetary Resources	Total
September 30, 2004						
Accounts Payable	6,154		6,154	12,808		12,808
Deferred Revenue	18,626		18,626			
Accrued Payroll and Leave	243		243	974	2,315	3,289
Workers' Compensation Benefits (Actuarial FECA Liability)					548	548
Total	**25,023**		**25,023**	**13,782**	**2,863**	**16,645**
September 30, 2003						
Accounts Payable	2,544		2,544	10,738		10,738
Deferred Revenue	11,320		11,320			
Accrued Payroll and Leave	396		396	481	2,208	2,689
Workers' Compensation Benefits (Actuarial FECA Liability)					569	569
Liability for Deposit Funds Collections						
Total	**14,260**		**14,260**	**11,219**	**2,777**	**13,996**

Note 7. Obligations Related to Cancelled Appropriations

Payments may be required of up to 1 percent of current year appropriations for valid obligations incurred against prior year appropriations that have been cancelled. The total payments related to canceled appropriations are estimated to be $0 and $0 as of September 30, 2004 and 2003, respectively.

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