



## **Testimony**

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# **Patient Safety: Supporting a Culture of Continuous Quality Improvement in Hospitals and Other Health Care Organizations**

*Statement of*

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Good morning. I am very pleased to be here today to discuss the important issue of supporting hospitals and other health care organizations in their efforts to build and sustain a culture of continuous quality and patient safety improvement.

Hospitals and other health care delivery systems provide millions of Americans each year with important, frequently life-saving, care. But, as we all know, medical errors and patient safety issues represent a national problem of epidemic proportions. And as we have seen from recent news headlines, no institution is exempt, and everyone who uses the health care system is at risk.

However, there is good news. Our health care system is committed to improving the quality and safety of the care provided to our Nation's citizens. That commitment has never been stronger as shown by the dedication of the health care organizations like those you have gathered here today.

This issue is a very high priority for HHS Secretary Tommy Thompson and for the Agency for Healthcare Research and Quality. Over the last 3 years, thanks to the vision of the U.S. Congress, AHRQ has dedicated \$165 million to patient safety research. AHRQ is now the leading funder of patient safety research in the world.

As a clinician, as well as the head of a federal agency, making sure that patients have safe, high quality health care is a personal priority for me. Like all clinicians, I have had personal experience with patient safety issues in my own practice.

It is important to note that the issue of improving patient safety is not new to the health care system. The landmark 1999 Institute of Medicine report, *To Err is Human*, was preceded by a body of research largely funded by AHRQ.

Also, segments of the health care system began to recognize where improvement was needed and came together to improve patient safety. For example, anesthesiology had an error rate in the 1960s and 70s of 25 to 50 per million patients. After a concerted effort, that rate has been reduced nearly seven-fold, to 5.4 per million.

In the mid-1990s, the American Medical Association launched the National Patient Safety Foundation, an organization committed to improving safety and reducing errors in medicine.

*To Err Is Human* galvanized fears and served as a further catalyst to efforts to improve safety and reduce errors. The report's estimates that 44,000 to 98,000 people die in hospitals each year due to medical errors shocked our Nation and all of us involved in health care. Media attention was high at the release of the report and continues with each high-profile case that makes news.

With all of this attention before and after the release of the IOM report, it would be easy to assume that we could do something quickly to improve patient safety. Yes, we are making progress and beginning to use what we know works to improve safety. However, we have much more to do. It is imperative that we do what is right and what evidence shows will work. We need to make sure that the cure for medical errors does not make the epidemic worse.

The key message of the IOM report and its sequel, *Crossing the Quality Chasm*, is that “it’s the system.” Health care professionals are human, and humans are prone to mistakes. We need to make sure that health care professionals work in systems that are designed to prevent mistakes and catch problems before they cause harm. Unfortunately, 3 years after the publication of *To Err is Human*, the message that “it’s the system” does not appear to have found much traction.

Yet this is the first step in creating a culture in hospitals and elsewhere in the health care system that focuses on continuous quality improvement. To that end, we need to let go of outdated views on how to deal with errors. We need to shift from “naming, blaming, and shaming,” to learning from errors, so they never happen again. This is not easy, but it is the right thing to do.

We can learn from other industries that have done this successfully. All of us involved in health care delivery can learn a lot from Starbucks, which has very definite systems in place to prevent mistakes. The next time you go in for a latte, notice how many people repeat your order after you place it. Then look at the check marks on your cup made to back up the verbal order. This is teamwork and a well-designed system. And the company has created a culture among its employees that embraces the system.

Obviously, making a latte isn’t as complex and challenging as providing patient services in today’s health care system. For example, a study found that an intensive care patient might have 178 different tasks performed on him or her by medical personnel in a single day. Each time a task is performed, there is a chance of injury or error.

However, many of the lessons from Starbucks apply: We need to build in redundancy – both within and across professional disciplines. Most importantly, we need much more repetition of instructions – called “read back” in the jargon – for almost all interactions in clinical care. If Starbucks does this for coffee drinks, shouldn’t health care providers do it for patients as well?

Another source of lessons on improving safety is the aviation industry. Between 1967 and 1976, the risk of dying in a domestic jet flight was 1 in 2 million. That risk fell to 1 in 8 million by the 1990s.

How did the aviation industry achieve this dramatic reduction? By designing systems that automate and standardize many tasks and controls. The aviation industry also employs “read back” and other techniques to increase communication and teamwork.

The aviation industry also has instilled a culture that emphasizes learning over blame. Pilots and other aviation workers are strongly encouraged to report errors and near misses without fear of recrimination.

This is possible because the confidential Aviation Safety Reporting System (ASRS) is not housed in the Federal Aviation Administration. Instead, ASRS is a part of NASA, which has no regulatory authority over the industry. ASRS collects and reviews the reports of errors and near misses and issues alerts of different levels based on the seriousness of the situation.

In another example, former Treasury Secretary Paul O’Neill created a culture of improvement and safety at Alcoa in the 1990s. The company reduced its lost work per day rate from 1.87 in 1987 to .42 in 1997, and it is continuing its efforts to improve.

To achieve this success, the company uses an online safety data system to track incidents, analyze their causes, and share solutions and information on how to prevent them from occurring again. To further foster the culture of safety, Alcoa employees at all levels are encouraged not only to report errors and near misses, but also to suggest solutions and improvements.

The lessons from Alcoa are already being put to work in the company’s hometown. The Pittsburgh Regional Healthcare Initiative, co-founded by Secretary O’Neill in 1997, is a coalition of approximately 30 area hospitals, major insurers, and corporate and civic leaders who are committed improving health care quality and safety using the principles of continuous quality improvement.

The Veterans Health Administration (VHA) within the Department of Veterans Affairs (VA) provides another excellent example of how re-engineering and a comprehensive effort have improved quality and safety. An article in the May 29 issue of the *New England Journal of Medicine* details the success of the VHA in dramatically improving the care it provides.

In Fiscal Year (FY) 2000, 90 percent of patients in VA health care facilities received appropriate care as measured by scores on 9 of 17 quality indicators that were directly comparable to Medicare and other nationally recognized quality organizations. These included mammography, receiving appropriate heart medications, diabetes testing, and cervical cancer screening. More than 70 percent of patients received appropriate care for 13 of the 17 indicators. VA reports that the current indicators (now a total of 18) are directly comparable to those used by Medicare and other nationally recognized quality organizations.

This is a dramatic improvement resulting largely from a concerted effort in the 1990s to improve the care provided in VA facilities. This effort included the implementation of a systematic approach to the measurement and management of health care as well as development of a systematic approach to accountability for quality. The article in the *New England Journal of Medicine* indicates that after this period of improvement, VA facilities out-performed Medicare fee-for-service care, which has been undergoing improvements of its own.

These organizations represent the leading edge of success, and we need to learn from them. However, we have some basic obstacles to overcome in health care, particularly around reporting of medical errors.

The first obstacle is the perception of the problem of medical errors.

According to a study published in the December 12, 2002, *New England Journal of Medicine*, patients and physicians thought that the published estimates of the numbers of avoidable deaths were much too high. Also, neither group bought the “it’s the system” message. In the case of surgical errors, both the public and physicians thought the surgeon should be held responsible, and the public was more likely to cite the institution as well.

A second obstacle is that we need to uproot the deep-seated fear of change within the health care industry. An integral part of this obstacle is that we need to develop a system that allows people to discuss and report errors without fear of recrimination or being sued.

An AHRQ-sponsored research study has shown that improving communication can improve safety. However, other research funded by AHRQ published in the *Journal of the American Medical Association* in February found open communication about errors still does not happen.

Based on 13 focus groups between April and June 2002, researchers found that patients and doctors largely agreed on telling patients about errors that cause them harm. However, they disagreed about what to disclose about those errors. Patients unanimously wanted an apology; information about the error and how it happened, an explanation of the implications of the error for their health how the problem could be corrected; and assurances that the error would be prevented in the future. Physicians, while wanting to be truthful, were reluctant to provide this basic information to patients because of fears of malpractice lawsuits or damage to their reputations.

Other obstacles to improving patient safety and reducing medical errors include the lack of technology and the need for greater and better evidence about what does and does not work in making the health care system safer.

AHRQ plays a unique role in helping the health care system overcome all of these obstacles and thus build and sustain a culture of quality and safety improvement in hospitals and health care organizations. A key mission of AHRQ is to develop evidence, tools, and systems that help improve patient safety and reduce medical errors

At the direction of Congress, and following recommendations from the Institute of Medicine, AHRQ has successfully built the foundation for a national Patient Safety Initiative from virtually a standing start.

Our 1999 reauthorization legislation added patient safety to the overall mission of the Agency. Specifically, the language stated that:

*The Director [of AHRQ] shall conduct and support research and build private-public partnerships to -- (1) identify the causes of preventable health care errors and patient injury in health care delivery; (2) develop, demonstrate, and evaluate strategies for reducing errors and improving patient safety; and (3) disseminate such effective strategies throughout the health care industry.*  
(Public Health Service Act, Sec. 912(c))

AHRQ has funded more than \$165 million in research dedicated to improving patient safety since FY 2001. This presents an extensive, user-driven patient safety research agenda. As with other AHRQ initiatives, we believe that the key to successful implementation of findings from this research is to get input early and often from the users of the research. We also encourage researchers to involve users in their studies, so they can begin using the findings immediately to improve quality.

For instance, we sought input from a broad array of stakeholders and users through a variety of means, including a National Summit on Medical Errors and Patient Safety, which was attended by public and private-sector users and funders of health care research. Held in September 2000 in Washington, DC, the National Summit was a daylong meeting designed to solicit responses from the users of patient safety research about their pressing needs and to highlight specific research questions related to those needs.

We also sought advice from AHRQ's National Advisory Council and the Federal Quality Interagency Coordination Task Force, known as the QuIC. The QuIC includes other HHS agencies, as well as all of the Federal agencies involved in the delivery, purchase, regulation, or study of health care services.

The more than 100 studies and other activities funded under AHRQ's patient safety research initiative fall into four categories:

1. Identifying Threats to Patient Safety: identify medical errors and causes of patient injury associated with the delivery of health care;
2. Identifying and Evaluating Effective Patient Safety Practices: identify, design, test, and evaluate practices that eliminate medical errors and system-related risks and hazards compromising patient safety;
3. Educating, Disseminating, and Implementing to Enhance Patient Safety: disseminate, educate about, and implement patient safety best practices that reduce or prevent actual (or the potential for) patient injury associated with the delivery of health care; and
4. Maintaining Vigilance: monitor and evaluate threats to patient safety.

While much of this research is still ongoing, I would like to give a few examples of our findings and successes to date:

A study cofunded by AHRQ and the National Institute on Aging at the National Institutes of Health found that Medicare patients treated in outpatient settings may suffer as many as 1.9 million drug-related injuries a year because of medical errors or adverse drug reactions not caused by errors. About 180,000 of these injuries are life-threatening or fatal, and more than half are preventable, according to the researchers.

When the researchers analyzed why the preventable adverse drug events occurred, they found that 58 percent involved errors made in the prescribing of medications, such as ordering the wrong drug or dose, not educating the patient adequately about the medicine, or prescribing a medication for which there was a known interaction with another drug the patient was already taking.

The investigators also found 61 percent of preventable adverse drug events involved mistakes made in monitoring medications, such as inadequate monitoring or a delayed response to symptoms of drug toxicity in the patient. However, the failure of patients to adhere to medication instructions contributed to over 20 percent of the preventable drug-related injuries.

Another AHRQ-funded study found that every year, sponges or medical instruments are left inside more than 1,500 surgical patients, about one or more cases each year for a typical large hospital. This can lead to serious problems ranging from bowel perforation and blood infection to death.

The study reveals for the first time that instruments and sponges associated with surgery are more likely to be left behind in cases involving

emergency surgery, obese patients, or unplanned changes in the surgical procedure.

Researchers concluded that a \$100 plain x-ray following high-risk categories of operations could prove a cost-effective way of ensuring that no foreign body is left in patients after surgery.

To make it easier for hospitals to encourage a culture of safety, AHRQ developed a Web site modeled on the format of morbidity and mortality (M&M) conferences that are routinely held within individual hospitals across the country. At M&M conferences, clinicians discuss specific cases that raise issues regarding medical errors and safety improvement. However, the findings from these conferences are not routinely shared outside each individual hospital. This is a lost opportunity for learning.

The AHRQ Web M&M site is an online, peer-reviewed patient safety journal and national M&M conference aimed at improving patient safety through analysis of submitted cases. The site <http://webmm.ahrq.gov> contains five new cases a month, which are submitted anonymously, and then discussed in forums on the site.

The AHRQ Web M&M is already recognized as an important teaching and learning resource on medical errors. It is being used in hospitals and teaching facilities, and there are over 2,000 registered users with the numbers continuing to grow. It fills a badly needed gap in training and education about medical errors and patient safety

AHRQ also supported the development of an evidence report titled, *Making Health Care Safer: A Critical Analysis of Patient Safety Practices*. This report comprises a systematic review of the scientific literature; 79 patient safety “best practices” were identified for review and discussion as to the evidence for their use. This report received a tremendous amount of attention, with several thousand requests for it over the past 2 years. It represents the first compilation of patient safety practices supported by a review of the related evidence behind them.

To help further the implementation of these patient safety practices by hospitals and others, AHRQ and the Centers for Medicare & Medicaid Services asked the National Quality Forum (NQF) to use the AHRQ evidence report to develop specific recommendations that could be used by other organizations seeking guidance on adoption and implementation of safe practices. The NQF is a not-for-profit membership organization created to develop and implement a national strategy for healthcare quality measurement and reporting.

The NQF used the AHRQ evidence report as a starting point for the consensus development process and supplemented it with information from several other sources. Last month in Los Angeles, AHRQ and the NQF released

the consensus report, which recommends 30 practices with good evidence and broad-based support.

In FY 03, AHRQ is poised to begin two exciting new programs under our patient safety initiative.

The first program is the development of a Patient Safety Improvement Corps – a cadre of specially trained patient safety experts who will provide technical assistance to States, local governments, and health care institutions on improving patient safety using evidence and proven best practices.

For the second program, AHRQ will fund Safe Practices Implementation Challenge Grants. The grants are intended to help hospitals and other health care institutions assess safety risks to patients, devise ways to prevent them, and implement safe practices that show evidence of eliminating or reducing known risks.

AHRQ plays a very unique and important role in helping the health care system improve quality and safety. For example, if the patient safety legislation passes Congress, we will have the information and tools ready and available to help the new Patient Safety Organizations improve safety.

For example, AHRQ has developed a free, Web-based tool that can help hospitals enhance their patient safety performance by quickly detecting potential medical errors in patients who have undergone medical or surgical care. Hospitals use the AHRQ Patient Safety Indicators (PSI) to determine whether the problems detected were caused by potentially preventable medical errors or have some other explanations. The PSIs allow for the detection of 26 types of adverse events, such as complications of anesthesia, blood clots in the legs or lungs following surgery, fracture following surgery, and four types of birth-related injuries.

Although the PSIs were developed primarily for hospitals to use in their quality improvement programs, other kinds of organizations will find the tool useful. For example, hospital associations can show member hospitals how they perform for each indicator when compared with their peer group, the state as a whole, or other comparable states.

Recently, two research articles demonstrated the power of the PSIs. The first, published in the March issue of *Health Affairs*, found that the number of potential safety-related events of most non-obstetric procedures included in the PSIs decreased between 1995 and 2000. The study found that most technical complications, such as postoperative hemorrhage or reopening of a wound, decreased between 1995 and 2000, except for a 7 percent rise in the number of accidental punctures and lacerations. Also during that time, obstetric trauma decreased about 3 percent, foreign bodies left during procedures decreased 7

percent, anesthesia complications decreased 18 percent, and transfusion reactions decreased 40 percent.

The second study was published in the June issue of the journal *Pediatrics*. Use of the PSIs to examine of the types of patient safety problems that children experience in hospitals found that the rates of such problems range from 0.2 (foreign body left during procedure) to 154.0 (birth trauma) problems per 10,000 discharge records. The study also found that those who experienced a patient safety problem in the hospital faced a 2-18 times greater risk of death than children who did not have such a problem.

I would like to thank you again for giving me the opportunity to discuss the very important issue of medical errors, patient safety, and furthering a culture of continuous quality improvement in hospitals and health care organizations.

I would like to reiterate the commitment that Secretary Thompson and the Administration have to creating a culture of improvement and safety in the health care system and providing evidence-based tools and resources to achieve that goal. In particular, I am very pleased that AHRQ is providing the science that is fueling these efforts.

One of the best examples of this commitment is continued support for patient safety research, the patient safety improvement corps, and the challenge grants in our proposed FY 04 budget.

The budget also includes a very exciting new \$50 million initiative to spur adoption of information technology by the nation's hospitals. Specifically, this initiative will provide planning and demonstration grants as well as technical assistance to help hospitals and other health care organizations to acquire and improve IT systems that support quality improvement and patient safety. This initiative will include a special focus of \$26 million on small and rural hospitals.

Working together, we can improve patient safety, enhance health care quality, and give the American people the best, safest health care system possible. Thank you.