

AHRQ Grantee Profiles



Grant Title: Making Health Care Safer for Patients

Principal Investigator: Peter Pronovost, M.D., Ph.D., Director of the Armstrong Institute for Patient Safety and Quality; Senior Vice President for Patient Safety and Quality; and Practicing Critical Care Physician

Institution: Johns Hopkins University School of Medicine

Grantee Since: 2001

Type of Grant: Various

Critical care physician Peter Pronovost, M.D., Ph.D., has devoted his career to making health care safer for patients. His work has influenced the continuum of safety: helping the field better understand how errors occur, learning how factors such as organizational culture affect safety, and developing interventions based on this knowledge to make care safer.

A 2001 AHRQ grant supported Dr. Pronovost's work in developing a confidential incident safety reporting system for intensive care units (ICUs). Drawing on data from 23 ICUs, Dr. Pronovost and his team identified common hazards that posed patient safety risks, such as inadequate training, education, and teamwork. This work informs modern incident reporting systems. The ICU safety project also led to the important insight that hospitals needed to establish a "culture of safety," an atmosphere in which everyone – from front-line clinical staff to housekeeping to hospital leadership – felt responsible for identifying and preventing the risks that could lead to harms.

To test this concept, Dr. Pronovost and the safety committee at The Johns Hopkins Hospital, where he practices and teaches at its medical school, developed a method known as CUSP, short for the [Comprehensive Unit-based Safety Program](#). CUSP emphasizes safety education, process improvement, teamwork, and learning from results. Central line-associated bloodstream infections (CLABSI) were nearly eliminated over a 4-year period in ICUs at Hopkins using CUSP.

The protocol was scaled-up in an AHRQ-funded collaboration involving more than 100 ICUs in Michigan and expanded to other States, eventually leading to a nationwide project to apply CUSP in more than 1,100 ICUs. Staff working in those ICUs reduced CLABSI rates by 41 percent. Today, ICU CLASBI are down 80 percent across the United States compared to levels in 2000, when *To Err is Human* was published. "All from just an initial \$500,000 investment from AHRQ," said Dr. Pronovost.

Beyond CUSP, Dr. Pronovost's vision of safer patient care includes re-engineering how ICUs and their complex array of technologies can co-exist in a safer, more seamless environment. AHRQ recently funded Dr. Pronovost and his team at the Armstrong Institute to develop design requirements for an "ideal ICU," enhance interoperability between EHRs and infusion pumps, and develop an indicator of unit-level stress that can predict and reduce risk. Since 2011, Dr. Pronovost has served as Johns Hopkins Medicine's Senior Vice President for Patient Safety and Quality as well as director of the Armstrong Institute for Patient Safety and Quality.

Dr. Pronovost, who was awarded a 2008 MacArthur Foundation "genius grant," believes that AHRQ occupies a unique role in the U. S. health care system that's as essential to high-quality medical care as the funding of basic and clinical research by the National Institutes of Health (NIH).

"If you want a [return] on our basic and clinical investments at NIH, you need AHRQ to improve care delivery so patients can benefit from the therapies that NIH discovered," he said. "AHRQ and only AHRQ is responsible for research on how to do it."

Consistent with its mission, AHRQ provides a broad range of extramural research grants and contracts, research training, conference grants, and intramural research activities. AHRQ is committed to fostering the next generation of health services researchers who can focus on some of the most important challenges facing our Nation's health care system.

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