

Johns Hopkins' Armstrong Institute Receives \$8.9 Million Patient Safety Grant

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Gordon and Betty Moore Foundation awards first installment of half-billion-dollar grant to design better way to provide harm-free hospital care

Johns Hopkins' Armstrong Institute for Patient Safety and Quality has received an \$8.9 million grant from the Gordon and Betty Moore Foundation, the first award given as part of an ambitious new \$500 million, 10-year program designed to eliminate all preventable harms that patients experience in the hospital.

The Johns Hopkins grant will focus on hospital intensive care units, with the goal of preventing harms by better engaging patients — and their families — in their own care, making them an integral part of the health care team. The Hopkins group's aim is also to improve outcomes by using a systems engineering approach to health care, leveraging technologies and creating better processes to ensure patients always receive the therapies and treatments they need and that clinicians work as effectively and efficiently as possible. The grant will provide further impetus to earlier groundbreaking patient safety work by the institute's director, Peter J. Pronovost, M.D., Ph.D., the senior vice president for patient safety and quality at Johns Hopkins Medicine.

"Despite heroic efforts by clinicians, patients continue to suffer preventable harm, in large part because health care is grossly under-engineered: Devices don't talk to each other, treatments are not specified and ensured, and outcomes are largely assumed rather than measured," Pronovost says. "This project will seek to change that by enlisting systems engineers to ensure patients always get the treatments they should, by engaging patients in every aspect of their care and creating a health care system that continuously improves."

The grant is the first in the Foundation's newly created Patient Care Program, which will fund many investigative grants and research projects in support of its bold efforts toward developing a fundamentally better approach to health care in the United States. The program seeks to improve quality and safety, reduce costs, and ensure dignity and respect are shown to both patients, their families, and those who serve them.

Established in September 2000, the Gordon and Betty Moore Foundation seeks to advance environmental conservation, scientific research and patient care — around the world and in the San Francisco Bay Area, where it is based. Gordon Moore is the co-founder of Intel Corporation and chairman emeritus of the corporation's Board of Directors.

Steve McCormick, president of the Gordon and Betty Moore Foundation, says the new Patient Care Program is focused on working with partners to create meaningful change within the U.S. health care system.

"By connecting two critical aspects of health care — improved systems for delivering care and better patient and family engagement — we believe the nation can improve the overall quality of care, foster greater respect for patients and their families and save money," McCormick says.

Adds George Bo-Linn, M.D., chief program officer for the Patient Care Program: “Improvements in patient care will be more significant and lasting if patients and their families are actively engaged — especially if we reconfigure clinical processes, care teams and technology into an integrated whole to focus on patient safety. Much improvement has occurred but too many patients still suffer from lapses in quality and safety. It’s ambitious to attempt to prevent all harm, but we must strive for no less.”

Each year, tens of thousands of preventable deaths occur in U.S. hospitals and millions are spent on patient readmissions that could be averted. Studies show that, nationally, one in five patients is harmed during hospitalization and roughly 60 percent of those cases are preventable.

The Foundation chose to work with Pronovost, whose team has already shown it can dramatically reduce central line-associated bloodstream infections in ICUs using a simple checklist coupled with culture change that empowered staff members to speak up when proper procedures weren’t being used. The checklist program, funded initially by the Agency for Healthcare Research and Quality, has been instituted in hospitals across the United States and in several countries abroad. While Pronovost is proud of his team’s accomplishments, that checklist took aim at only one problem. There are so many other harms that can befall hospitalized patients, he says, and not enough focus has been placed on those. Many more harms need to be tackled at the same time, and that can be accomplished only by using an automated, systems engineering approach, he says.

“A patient in the ICU or with multiple chronic conditions may need to receive scores or hundreds of therapies a day, yet there is no list of what needs to be done, no feedback about whether they have been performed and they largely happen by memory rather than automatically,” Pronovost says. “Contrast that with all of the automatic safety checklists in cars. No wonder health care continues to harm patients while driving deaths continue to decline.”

Ensuring patient and family participation in care is another key focus of the grant. Studies have shown many patients don’t feel engaged in their health care decisions and feel that their physicians don’t always tell them about all treatment options. Patients have the most intimate knowledge of their medical condition, and that knowledge can prove invaluable to their treatment. Research suggests that outcomes can be improved by engaging patients and their families in the health care process.

“The failure to provide care that respects patients’ dignity and autonomy is a harm as critical as a clinical harm,” Pronovost says. “When patients and families are significantly engaged, they will help to achieve important medical outcomes that are more meaningful, efficient and durable.”

Nicole D. James, a sickle cell patient from Elkridge, Md., knows firsthand how important it is both for patients to be full partners in their health care and for all of the moving parts of medical care to be integrated in a common sense way to reduce the risk of harm.

The 37-year-old property manager, like others with the genetic blood disease, experiences regular “pain crises,” periods of pain so debilitating and intense they require narcotics, often in a hospital setting. She tells of a time when one such crisis sent her to a local emergency room in the middle of the night. While there, the physicians diagnosed a lung infection using X-ray imaging. Without telling her, the doctors immediately started treatment. Had they talked to her, they would have known that the shadow on her lung shown on the X-ray was instead scar tissue from an earlier case of pneumonia. But they didn’t.

“What should have been a two-day hospital stay turned into two weeks because I wasn’t consulted before being treated,” she says. “The medical team’s failure to ask questions inflated costs unnecessarily — for me as well as my insurance company — and caused me to lose more time away from my job.”