



HP and Lucile Packard Children's Hospital Develop Digital Patient-safety Dashboard to Improve Patient Care

One out of three patients benefit from pilot program

PALO ALTO, Calif., Oct. 20, 2011 – HP and Lucile Packard Children's Hospital at Stanford today announced a new real-time patient status system that prompted a change in care in one out of three patients during a trial period.

The Patient-Centered Dashboard uses data from electronic medical records to better represent patient status, replacing the handwritten whiteboards currently found in many hospital nursing units. The dashboard also improves compliance and is designed to be usable in other hospitals in the United States and around the world.

Once the traditional whiteboard was replaced by an electronic interface, Packard Children's Hospital staff worked with researchers from [HP Labs](#), the company's central research arm, to use the immense amount of data available inside a patient's electronic chart. They developed a system to turn lights on the dashboard to red, yellow or green, signifying the level of urgency with which attention is needed from medical staff to help prevent certain life-threatening complications in the intensive care unit.

"Electronic medical records are data-rich but information-poor," said Dr. Natalie Pageler, clinical assistant professor of pediatrics at Stanford University School of Medicine and project manager for the Patient-Centered Dashboard at Lucile Packard Children's Hospital. "This pilot is a first step in translating the tremendous volumes of data we now have available in a hospital's electronic medical record system into practical information that can guide clinical decision making at the bedside of every patient."

The dashboard system helps to prevent human error in medical settings; these errors can lead to complications and significantly increase the risk of mortality or the duration of a hospital stay. By reviewing the dashboard during daily rounds, physicians and nurses were alerted to necessary and

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potentially life-saving procedures, including:

- Ordering the removal of a central venous catheter that is at risk of infection
- Changing from intravenous to oral medication
- Decreasing the use of unnecessary laboratory testing
- Using only necessary sedatives
- Taking measures to prevent pressure ulcers (bed sores)
- Changing the amount a patient's head is elevated to prevent ventilator-acquired pneumonia
- Identifying overdue procedures that place the patient at risk of infection

[In May](#), HP and Packard Children's Hospital announced a social innovation collaboration that highlighted joint research projects, such as the Patient-Centered Dashboard. The organizations have been collaborating on research around patient safety for more than two years.

As part of the company's [global social innovation program](#), HP aims to enrich society by using the breadth and scale of its technology to drive structural, systemic improvements in health access and delivery.

"By getting better information into the hands of caregivers, technology has the potential not only to improve lives, but also to save them," said Jaap Suermondt, director, Healthcare Research, HP Labs, HP. "Through our collaboration with Packard Children's Hospital, we were able to develop a technology solution that finds and combines information at risk of being overlooked deep inside electronic medical records, and bring it to the eyes of the entire care team, ultimately allowing them to make critical decisions and help prevent complications."

Dr. Pageler, Dr. Suermondt and Dr. Chris Longhurst, chief medical information officer at Lucile Packard Children's Hospital, will be presenting the Patient-Centered Dashboard and the research results at [AMIA's 35th Annual Symposium on Biomedical and Health Informatics](#) in Washington,



D.C., on Oct. 26.

Supporting resources

- [HP and Lucile Packard Children's Hospital project video](#)
- [Data Central blog post](#)
- [HP Global Social Innovation website](#)

About Lucile Packard Children's Hospital at Stanford

Celebrating its 20th anniversary in 2011, Lucile Packard Children's Hospital is annually ranked as one of the nation's best pediatric hospitals by *U.S. News & World Report*, and is the only San Francisco Bay Area children's hospital with programs ranked in the *U.S. News Top Ten*. The 311-bed hospital is devoted to the care of children and expectant mothers, and provides pediatric and obstetric medical and surgical services in association with the Stanford University School of Medicine. Packard Children's offers patients locally, regionally, and nationally a full range of health care programs and services, from preventive and routine care to the diagnosis and treatment of serious illness and injury. For more information, visit www.lpch.org.

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