

# Project HealthDesign

Rethinking the Power and Potential of Personal Health Records

[www.projecthealthdesign.org](http://www.projecthealthdesign.org)



Robert Wood Johnson Foundation

## Who We Are

*Project HealthDesign* is a \$5 million national program designed to support health and information technology pioneers in creating a new generation of personal health record (PHR) systems that can share common technical functions. The project is funded by the Robert Wood Johnson Foundation's Pioneer Portfolio, which funds innovative ideas that may lead to future breakthroughs in health and health care, with additional support from the California HealthCare Foundation.

*Project HealthDesign* funded nine multidisciplinary teams to develop PHR applications that extend and enhance the range of services offered by existing PHRs. Through creative use of information technology that is guided by extensive user-centered design activities, this bold new program provides a variety of tools and services that draw on clinical records and relevant information from people's daily lives. The Project HealthDesign teams' PHR applications go beyond providing access to health information to interpret consumers' health data and provide customized, easy-to-use feedback that can guide daily health decisions and empower consumers to manage their health more effectively. The grantees' prototypes are now being tested by patients and families to help them manage complex health data, improve their health and get the care they need. Complementing the individual work of each team, technical specialists created a common platform of computer resources that will make it easier and more efficient in the future to build highly tailored PHR tools.

## National Program Contact

Patricia Flatley Brennan, R.N., Ph.D.  
National Program Director  
Project HealthDesign  
National Program Office  
University of Wisconsin—Madison  
School of Nursing  
600 Highland Avenue, CSC H6/297  
Madison, WI 53792

Linda Brei, Communications Liaison  
(608) 263-5250  
[lgbrei@wisc.edu](mailto:lgbrei@wisc.edu)

[www.projecthealthdesign.org](http://www.projecthealthdesign.org)

## Project Contact

Cecelia Horwitz  
Executive Director  
University of Rochester  
Center for Future Health  
601 Elmwood Avenue, Box CFH  
Rochester, NY 14642  
(585) 273-1555  
[cecelia\\_horwitz@futurehealth.rochester.edu](mailto:cecelia_horwitz@futurehealth.rochester.edu)

## The Challenge

Many of the health care technology solutions available today are designed to help physicians or professionals in health care institutions. Taking a significantly different approach, the *Project HealthDesign* team based at the University of Rochester wants to use technology to help people diagnosed with congestive heart failure (CHF) manage their health from their homes, as part of their daily lives. Building on decades of research on how people interact with technology to solve problems, the Rochester team chose to develop a personal health management assistant that helps patients better understand and interpret the symptoms they experience. The team focused on this disease not only because millions of Americans suffer from CHF but because the condition requires, as with many chronic illnesses, that the patient monitor themselves for changes and follow specific guidelines for self-care activities to keep themselves stable and out of the hospital.

## The Solution: Where We Are Now

Through focus groups, interviews and surveys, the Rochester team created designs for a relevant personal health record (PHR) application. They found that the most common questions the heart failure patients have include: "How am I doing today?" and "What can I do to help myself?" While they found that patients were willing to "check in" daily with a computerized device, they also found that patients wanted to spend fewer than five minutes per day using it. Building on the team's previous experience in demonstrating the inherent power of the spoken word in capturing information, the team designed a computerized "conversational assistant" to provide a "daily check-up." for CHF patients.

Through a series of questions and responses, written in conversational language, patients respond with their own appraisal of how they are feeling. The computer decodes the person's own words and then interprets how they are doing each day. Then the person receives personalized treatment recommendations based on established guidelines for heart failure patients, and the system collects longitudinal data to share with patients and their doctors.

The Rochester team now has a simple prototype system for chronic heart failure self-care management and has evaluated it informally. Interaction is via spoken language or typed text chat (written in standard non text-messaging language). Through computer-generated graphics, the system's displays its understanding of the patient's own words.

The team hopes to demonstrate that this device will not only keep patients out of the hospital setting by alerting them to potential changes in their disease but also give patients confidence in their ability to go about living regular lives.