



Pioneer



Robert Wood Johnson Foundation

Since its inception five years ago, the Pioneer Portfolio has addressed the fact that **progress towards solving** tough health and **health care problems** in America often has been **too slow** or **limited in scope**.



We have sought ideas with potential to spark dramatic change, rather than gradually improve upon the status quo. Several grantees helped shape the trajectories of important trends in the future of health and health care, and Pioneer invested in several others with the potential to follow suit.

In 2008 *Project HealthDesign*, a national program to catalyze innovation in the emerging field of personal health records (PHRs) and personal health technologies, completed its first phase. Project HealthDesign pushed the notion of PHRs beyond that of static data repositories, offering a new vision based on separating the *data* contained in one's health records from the *applications*, or tools such as alerts and reminders, that people use to manage their health conditions. We supported nine grantee teams to design PHR application prototypes that could run on a common technology platform. Since the program's start, Microsoft and Google introduced PHR platform offerings and encouraged third-party development of PHR applications that run on their platforms. While Project HealthDesign's vision of next-generation PHRs appears to be taking hold, we still need to make progress on reimbursement, incentives and financial viability to ensure that consumers will have PHRs that work with smart tools to interpret their data and provide tailored feedback to guide everyday health decisions.

A University of Iowa team also applied technology in novel ways to improve public health. Since 2005 Pioneer has supported the testing of online electronic prediction markets to forecast the spread first of domestic seasonal and, later, global avian influenza. Results from the 2006–2007 domestic flu season demonstrated that the markets accurately predicted outbreaks two to three weeks in advance; in contrast, the Centers for Disease Control and



Prevention (CDC) and public health departments generally employ surveillance systems with retrospective data, confirming outbreaks and detecting patterns after they occur. In 2008 this team began work with the CDC's Division of STD Prevention and other public health partners to hasten progress in eradicating syphilis. The Iowa researchers will carefully track the markets' performance, seeing whether they can serve as a powerful tool to enhance surveillance, prevention and response efforts for a wider range of public health threats.

Since its early days Pioneer has looked to diverse fields—some familiar and others new—to spark health and health care breakthroughs. For example, this year marked the first round of grants from *Health Games Research*, a national program building evidence on how video and computer games can benefit players' health behaviors and outcomes. Roughly \$2 million in grants supported a total of 12 projects, including one looking at how people in substance abuse treatment can practice skills and behaviors in a virtual game world to prevent real-world relapses.

Through a \$750,000 grant to Health Care Without Harm, Pioneer is examining what advances may emerge at the intersection of the green movement with health care. This group leads a network of health care institutions that are studying which changes in design, construction, purchasing and other practices yield a double-win—minimizing hospitals' environmental footprints *and* improving patients' and workers' health and safety. Installing sustainable rubber flooring may lead to fewer slips and falls, using greener cleaners may lower respiratory illness rates and more energy-efficient ventilation systems may help reduce the transmission of hospital-acquired infections. The hope is that environmentally friendly and health-promoting practices spread widely, possibly effecting changes in building code throughout the sector.

We also awarded \$2.7 million to the University of Pennsylvania to lay the groundwork for "positive health," a new approach to improving wellbeing that emphasizes "health strengths" rather than the conventional mix of disease diagnosis, treatment and prevention. Building on progress in the positive psychology field, which applies validated interventions to boost the strengths and virtues that help individuals thrive in daily life, project director Dr. Martin Seligman explores whether positive health may reveal a variety of potent, low-cost approaches that can serve as a buffer against physical and mental illness and, more importantly, enhance people's overall health strengths.

Genomics is another realm that will enable medicine to be more precise and effective in promoting health and preventing and treating illness. To strengthen the research infrastructure needed to achieve this goal, we awarded the Kaiser Foundation Research Institute \$8.6 million to develop one of the world's largest and most diverse repositories of genetic, environmental and health data. Scientists will use the repository, known as a

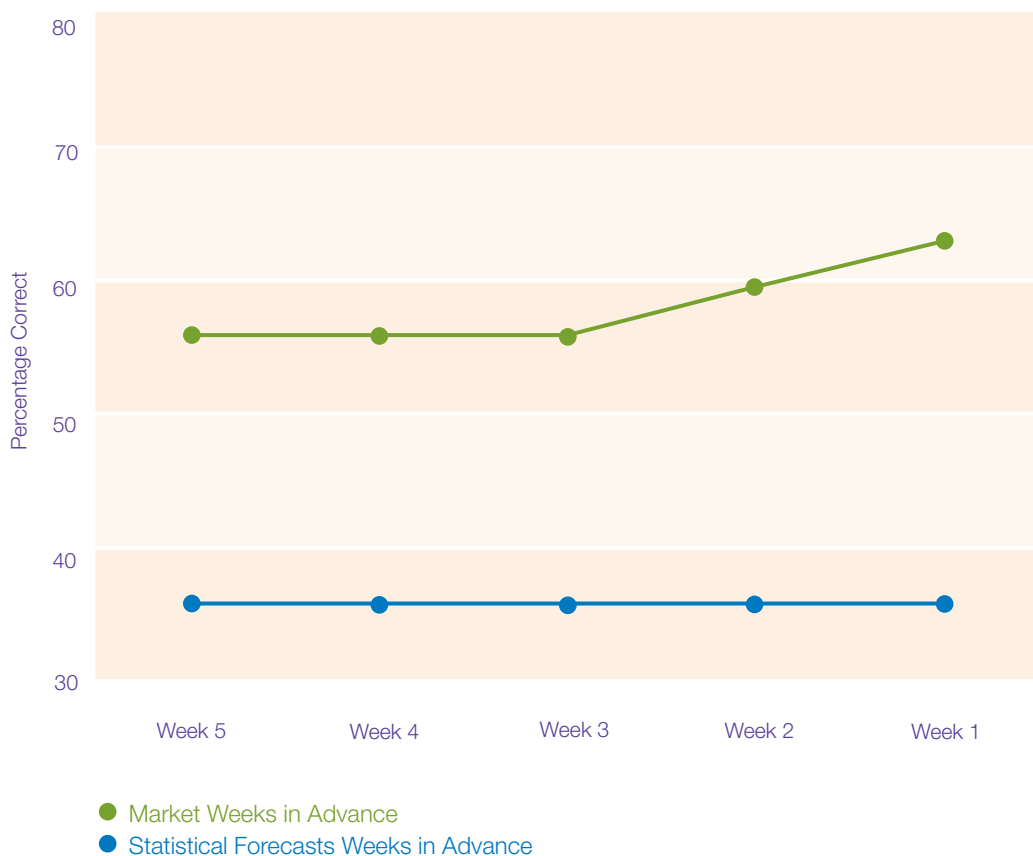


“biobank,” as part of a comprehensive research initiative to conduct groundbreaking work to establish the genetic and environmental factors that influence common diseases such as heart disease, cancer, diabetes, Alzheimer’s and asthma, among others.

Going forward, potential areas of exploration include the growing trend of collecting real-time data from large numbers of people, which may illustrate aggregate patterns of behavior and activity that can be applied to improving personal and public health. The Pioneer Portfolio also continues to follow the impact of disruptive innovation in health and health care, which may spur the development of significantly different business models that make quality care cheaper and more efficient for consumers.

For additional information about our initiatives and objectives, visit www.rwjf.org/pioneer.

The Influenza Prediction Markets: Prediction Markets versus Statistical Forecasts



Source: Nelson FD, Neumann GR and Polgreen PM. *The Influenza Prediction Markets: An Assessment*. The University of Iowa, Tippie College of Business, Department of Economics and the University of Iowa Carver College of Medicine, Department of Internal Medicine, 2009.