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PIONEER PORTFOLIO

The Pioneer Portfolio is powering ideas to transform health. We accelerate the trajectory of innovation by investing in visionary thinkers, supporting exploration and helping great ideas to gain momentum. Pioneer focuses on the future, seeking breakthroughs with the potential to generate significant health and social impact.

OUR APPROACH

Pioneer addresses the fact that progress toward solving tough health and health care problems often has been too slow or limited in scope. Through this portfolio, the Robert Wood Johnson Foundation has dedicated staff and financial resources to invest in trends and ideas with the potential for exponential change. We work with innovators who often look at the world differently—those who reframe problems and the pathways to solutions in order to create a significantly better health and health care future for all Americans. We see possibility in unconventional approaches and remain open to untested models, new connections, risk and failure. To advance these ideas, Pioneer offers financial support,

strategic counsel and opportunities to work with others who share our passion for change and our impatience with incremental gains.

WHAT WE FUND

The Pioneer Portfolio's work, driven by its grantees and partners, powers transformation all along the health and health care continuum—from advancing novel approaches in health research and medical decision-making; to designing the systems and institutions of tomorrow; to empowering people through leaps in patient-inspired innovation. We often look beyond the mainstream of health and health care for innovations that may have transformative impact. Several Pioneer

projects apply approaches from diverse fields such as finance, design, economics and entertainment to forge new solutions in health and health care arenas. In this way, Pioneer provides a distinct alternative to other Foundation program areas that focus on targeted problems or populations.

We invest in potential, often considering ideas that may be at earlier stages of development than those in other Foundation funding areas. By funding projects in stages, we can assess initial outcomes and potential impact before pursuing longer-term, larger investments. Because we are looking for opportunities with high, possibly long-term returns amidst great uncertainty, we recognize that our portfolio of projects may



include some that do not accomplish the hoped-for objectives. What is important is that we provide space for pioneers to test transformative ideas, advance new approaches and take risks to transform the future of health and health care.

SOME OF THE IDEAS WE ARE SUPPORTING:


- **U.S. Biobank.** We're working with Kaiser Permanente to build the world's largest and most diverse biorepository of genetic, environmental and health data. With the goal of gathering a half-million samples, the first 200,000 will be collected by 2010 and linked to Kaiser's world-class electronic medical record, disease registries, behavioral survey data and detailed environmental information. The size and power of this resource will allow scientists to conduct groundbreaking studies in to the genetic and environmental factors that influence people's health and

whether they get diseases, unlocking questions we previously couldn't answer. Most recently, the National Institutes of Health announced that it is funding the genotyping of the first 100,000 samples, establishing the biobank as the most comprehensive genetic library ever created.

- **Games for Health.** We're quickly moving toward the day when digital interactive games play a pervasive, powerful role in our health and health care—motivating healthy behavior change, teaching health concepts that resonate and stick, enhancing and extending people's cognitive health, taking medical training to new levels, and even empowering patients to manage health information that emanates from, and feeds in to, game play tailored to their specific health needs. Since 2004, Pioneer has supported the *Games for Health Project* to build this dynamic field and connect health and health care

problems with solutions emerging from the game industry. And, to build evidence on whether games improve health outcomes and identify game design elements that can drive health behavior change, Pioneer launched the *Health Games Research* national program in 2007. Grantees are exploring whether: motion-based games help stroke patients progress faster in physical therapy; playing dance pad games collaboratively vs. competitively influences kids' body mass index levels; or, virtual worlds allow people in substance abuse treatment to practice skills and behaviors that prevent real-world relapses. These are the health innovations that meet people where they are.

- **How Health Spreads Through Social Networks.** Are the friends of the friends of your friends shaping your health? Connecting sociology and epidemiology, Harvard internist and social scientist



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Nicholas Christakis is leading a research team in creating statistical models to explore how health behaviors spread within social networks. Using the well-known, longitudinal Framingham Heart Study data, Christakis discovered potential basis for the theory that positive and negative health outcomes jump around within social networks in much the same way as viruses. Initial findings on how obesity, smoking and even happiness spread through people's networks have gotten much acclaim; to further validate this approach, Christakis is developing innovative statistical models that may enable researchers to more thoroughly explore the spread of health outcomes and behaviors—both good and bad—within complex, real-world social networks that evolve across time. If proven, this discovery could help experts target effective interventions to promote healthier behaviors at the network rather than the individual or group level, assisting far more people in

preventing or treating a wide range of diseases and health complications.

- **Health Prediction Markets.** Suppose a stock market could be repurposed to predict the next influenza hotspot in advance. The University of Iowa Business School and infectious disease experts imagined just that, and the Iowa Electronic Health Markets were born. Pioneer has supported several health prediction markets to date, forecasting the spread of, first, domestic seasonal and, later, global avian influenza. During the 2006–07 U.S. flu season, the markets accurately forecasted outbreaks a full two to three weeks in advance of official announcements. Building off the success of the flu markets, the University of Iowa team is collaborating with the Centers for Disease Control and Prevention to attempt to get an earlier, more precise read on the spread of syphilis in order to hasten progress toward its eradication. The team will

closely track progress, seeing whether prediction markets can serve as a tool to enhance surveillance, prevention and response efforts for a wide range of public health threats.

- **Project HealthDesign.** *Project HealthDesign* is catalyzing and testing new tools and systems that help people capture, understand and interpret information about the everyday patterns of their lives—such as diets, activity levels, pain levels and medication usage—and then relay that data to health providers to make it an integral component of their care plans. The program's first phase supported nine interdisciplinary teams to look beyond stand-alone personal health records (PHRs) to design next-generation PHR systems that empower patients to make better health choices and more effectively manage their care. A patient managing chronic conditions such as asthma and diabetes, for example, could use a PHR system



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outfitted with tailored IT applications that remind her to take medications, monitor glucose levels and even incorporate air quality updates into daily decisions. Moving forward, *Project HealthDesign* will develop innovative ways to help people living with chronic illnesses capture and interpret information on “observations of daily living” and enable clinicians to integrate that data meaningfully into clinical practice. Beyond just giving patients access to their health information, smart PHR systems will help them and their care providers manage and apply that data to improve their health, care and quality of life.

To learn more, visit www.rwjf.org/pioneer
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