



Robert Wood Johnson Foundation

Pioneer

We face a growing chronic disease burden borne by an aging population, potential disease pandemics, and health care institutions struggling to harness the information revolution to improve the quality and coordination of patient care. The Pioneer Portfolio looks down the road toward future health and health care challenges, seeking and supporting innovative, often unconventional ideas that may lead to breakthrough solutions.

Several Pioneer Projects may be leading potentially transformative change in addressing health and health care problems. In July we launched *Project HealthDesign: Rethinking the Power and Potential of Personal Health Records*, a program designing next-generation personal health record (PHR) systems in ways that empower patients to better manage their health and health care. Patients may find today's PHRs useful in tracking medical conditions with their providers or obtaining prescription renewals; those functions, however, typically operate in isolation. If a patient moves to a new provider using a different PHR, her existing records may not transfer effectively. Project HealthDesign teams, working with patients and caregivers, will design and test distinct PHR applications that operate in sync to help people achieve varied health goals in an integrated fashion. The vision is that a patient managing asthma and diabetes, for example, uses a PHR system outfitted with tailored tools that remind her to take medications, monitor glucose levels and even incorporate air quality updates into daily decisions. Beyond giving patients access to their health information, smart PHR systems will help them manage and apply that data to improve their health, care and quality of life.

Other grantees are testing novel ways to improve disease surveillance and response efforts. At the University of Iowa, business school professors teamed up with an infectious disease expert to test whether the Iowa Electronic Markets—markets that aggregate information and are best known for predicting election and box office results—can target ahead of time what strain of, and where, influenza may strike. Having successfully piloted the program in Iowa with traders ranging from pharmacists and local health officials to school nurses, grantees are now working with the state epidemiologist to run a North Carolina market. The Navy also is exploring how flu markets may help it to accurately predict strains and vaccinate personnel appropriately. This innovative forecasting approach may supply public health officials and policy-makers with a valuable tool to complement traditional disease surveillance methods and guide decisions in fighting both conventional influenza and other disease threats. Toward that end, we recently supported the Iowa team to test the market's effectiveness in forecasting the probability of a human-transmitted avian flu outbreak.



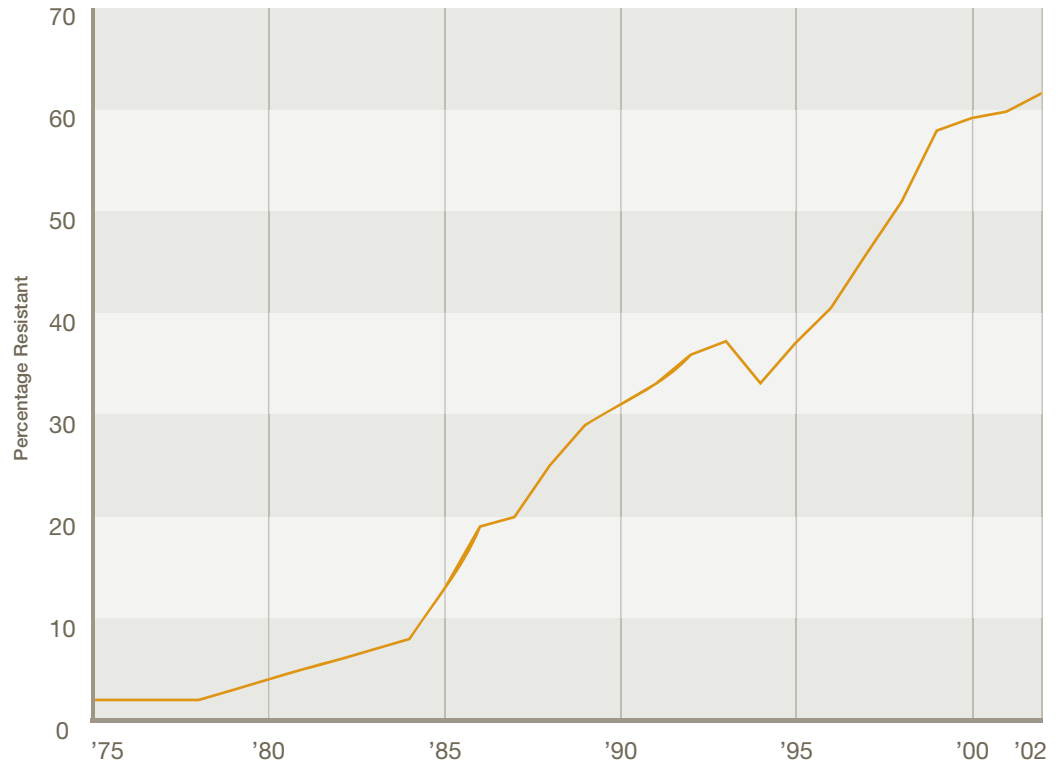
Pioneer grants also explore out-of-the-box solutions to entrenched problems such as antibiotic resistance. Ramanan Laxminaryan, an economist with Resources for the Future, believes that a natural resource economics approach holds greater promise for combating antibiotic resistance than mainstream strategies, such as changing doctors' prescribing behaviors or dampening consumer demand for drugs. Working with regulatory, health, pharmaceutical and economic experts, Laxminaryan is identifying policy alternatives for managing the nation's antibiotic supplies and reversing the crisis in drug resistance.

At the institutional level, Pioneer supported the Plexus Institute to test "positive deviance" (PD) approaches to fighting Methicillin-Resistant *Staphylococcus Aureus* (MRSA) infections in health care facilities. PD is based on the observation that, in most communities, there are certain individuals or groups whose uncommon behavior or practices allow them to find better solutions to seemingly intractable problems than peers and colleagues who have access to the same resources. Often, approaches emerge from people at all levels of an organization that are more effective in addressing a problem than complex, top-down interventions. In hospitals fighting MRSA, this could mean that nursing aides highlight how food trays could spread bacteria from room to room and suggest preventive solutions, or an orderly notes that hand-washing all but disappears when an emergency situation occurs and communicates that to clinical staff. Plexus is working with six hospitals to identify successful PD approaches and their goal is ambitious: They want to spur a nearly 75 percent reduction in MRSA infections among participating facilities. This could reap dramatic benefits for patient health and safety and cost savings for hospitals.

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



Emerging Prevalence of Methicillin-Resistance Among *Staphylococcus Aureus* in U.S. Intensive Care Units



SOURCE: Centers for Disease Control and Prevention, National Nosocomial Infections Surveillance System, October 2006.

NOTE: Methicillin-resistant *Staphylococcus Aureus* (MRSA) is a type of bacteria that is resistant to certain antibiotics. These antibiotics include methicillin and other more common antibiotics such as oxacillin, penicillin and amoxicillin.