

Patient-Centered Research and Technologies



RTI International is developing and researching promising patient-centered technologies to improve health outcomes, access to health resources, and affordability. At the cutting edge of research that leverages mobile health applications, interactive web communities, decision support, and communication tools, RTI's multidisciplinary team uses techniques ranging from complex evaluation methodologies to user-centered design to advance participation in health and health care.

Overview

Patients and caregivers using a broad range of technologies can transform the way they manage health information, coordinate health activities, and engage with care providers. RTI researchers use cutting-edge approaches and innovative technologies to improve the way health data are accessed and managed, offer actionable reminders and interactive tools to patients, and address complex challenges such as data interoperability and the combined use of clinical and administrative data for analysis and decision support. We continue to advance the use of real-time and retrospective patient data to provide high-value applications and interventions for users, both in the United States and internationally.

RTI's research-based design process has led to innovations in personal health record applications, mobile technologies, remote monitoring methods, and social media tools. As patient-centered research and technologies advance rapidly, RTI's experience in basic and applied health and health IT research positions us well to meet the challenge.

Areas of Expertise

RTI scientists have broad experience with a wide range of technology-focused interventions in applied settings, from Web-based virtual reality applications to health care decision-support tools for patients and professionals. We offer research expertise that leverages the concepts of

Health 2.0 tools such as blogs, podcasts, tagging, search, and wikis. These approaches, along with user-generated content and open source principles, have shown promise in areas such as personalizing health care, collaboration, and health education promotion. RTI has developed novel applications, including real-time decision-support tools, for patients and providers using mobile platforms, including Android and iPhone. An RTI-developed system for generating and managing research-related text messages for mobile phones has been used to support health behavior change in the areas of disease prevention, risk reduction, and chronic disease management.

In addition to research and development, RTI scientists are skilled in research collaboration and dissemination of tools, results, and lessons learned. We routinely collaborate across fields of study, offering comprehensive, multidisciplinary methodologies and unique capabilities to support all aspects of research, development, and evaluation of patient-centered technologies. We offer a broad set of activities, including formative research, message development and testing, experimental design, data collection, analysis, and reporting. Our staff have the skills and experience to transfer knowledge—using emerging technologies as well as traditional forms of information-sharing—to key stakeholders including health care providers, consumers, researchers, and academicians.

Project Highlights

Under a U.S. Agency for Healthcare Research and Quality contract, RTI is currently conducting a trial to evaluate the use of text messaging to facilitate health behavior change among persons living with HIV. RTI will develop, implement, and pilot test an intervention that aims to improve health care quality and outcomes among HIV-positive patients treated in an ambulatory care setting. Study participants receive tailored text messages based on their prescribed medications and appointment adherence reminders, risk reduction messages, social support, general health and wellness recommendations, and patient activation prompts. RTI is assessing patient satisfaction, targeted knowledge, attitudes, beliefs, intentions and behaviors, and health care quality during the pilot implementation in order to determine its feasibility in other ambulatory care settings.

As part of Robert Wood Johnson Foundation's Project HealthDesign, our team developed a personal health record (PHR) application to help sedentary adults become more physically active using a highly tailored intervention to support physical activity behavior change. A multidisciplinary research team at RTI conducted this work in partnership with the Cooper Institute, a Texas-based leader in research on physical activity. As the only Round 1 grantee for Project HealthDesign chosen to lead a Round 2 project, RTI also developed a smartphone-based PHR for adults living with asthma to better manage their condition and share information about their health status with their clinicians, enabling a disease management approach.

In the United States, RTI is evaluating an audio computer-assisted self interview, interactive counseling, and self-testing computer tool called CARE in acute care settings. The CARE tool is designed to help low-literacy populations establish a prioritized problem list, document past medical history, complete point-of-care testing, and obtain preventive and chronic health referrals. Requiring little staff time, this tool supports patients and providers by offering critical health education, testing, and referrals that may otherwise be missed in acute care visits.

In India and Bangladesh, RTI is developing and evaluating HealthBox, a comprehensive technology to guide the community health worker in providing an accurate general health assessment, interactive education, point-of-care testing, and algorithmic treatment and referrals. HealthBox features audiovisual content for low-literacy populations and intuitive, easy-to-use tablet computers to enable community health workers to store and upload patient information to a personal health record.

RTI is launching a U.S. study of an internet-based program for patients diagnosed with a sexually transmitted infection (STI) that will enable delivery of home specimen collection kits, internet-based test results, and internet-based prescription services. In addition, data from test results and treatment history will be leveraged to trigger health department partner notification services and update STI clinic electronic health records so that patients requiring subsequent STI testing and treatment services will not be lost to follow-up.

More Information

Jonathan Wald, MD, MPH
Director, Patient-Centered Technologies
Center for the Advancement of Health IT
781.733.8116
jwald@rti.org

RTI International
1440 Main Street, Suite 310
Waltham, MA 02541-1623 USA

RTI 7446 R2 0412



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RTI International is a trade name of Research Triangle Institute.

