



Focus on

Health Information Technology

Information technology is transforming the way physicians practice medicine, the way health care systems do business, and the way consumers make decisions about health care. For over a decade, RAND researchers have been at the forefront of efforts to analyze and evaluate how health information technology (HIT) can improve patient outcomes, increase access to care, and reduce spending. Since an influential 2005 study on the potential benefits of widespread adoption of HIT, RAND has considered the design of electronic health records (EHRs), examined the impact of health information exchange (HIE), and reviewed the impact of HIT in the context of recent federal legislation.



RECENT RESEARCH

Telemedicine

Cheaper and faster technologies coupled with increased Internet access have led to new interventions using telemedicine. The aim of these interventions is to expand access, decrease costs, and improve convenience. RAND has evaluated a range of pilot systems in telemedicine, both at the national and regional levels.

Several studies have examined the impact of telemedicine on access to and quality of care. A large direct-to-consumer service, offering treatment over the phone or via the Internet for minor acute conditions, improved access, but researchers noted less appropriate prescribing of antibiotics. And while e-visits may be less costly than traditional office visits, they may also be associated with higher antibiotic prescribing rates. A current project is evaluating how teledermatology services can improve access for patients in underserved and rural communities.

RAND researchers have also analyzed the economic impact of telemedicine, making recommendations for potential payment schemes beyond traditional fee-for-service models.

Patient Safety

As HIT becomes more prevalent, the risks associated with its use have become more apparent. A RAND report describes HIT as a double-edged sword, capable of alerting doctors about potential medication errors on the one hand, but potentially overloading them with information on the other. Hospitals with expertise in process improvement appear better able to identify and mitigate HIT-related safety risks than ambulatory practices, many of which have limited awareness of, and little success in reducing, risks.

Current RAND projects are exploring how advances in data, analytics, and HIT can identify complex patients and

improve care coordination, as well as how HIT can promote the adoption of evidence-based practices to help health systems achieve high performance.

Redesigning EHRs for Better Outcomes

EHRs are a source of both promise and frustration for physicians—lack of interoperability between systems and the amount of time required for data entry are two major concerns. RAND has evaluated several creative approaches to improving EHRs, including incorporating the principles of behavioral economics and social psychology to improve feedback to physicians. Researchers have also explored ways that EHRs can strengthen and improve care coordination among health care providers.

Military and Veteran Work

To improve access to behavioral health care among military populations, RAND researchers have recommended increased use of telemental health services for geographically remote service members and their dependents. Two ongoing projects are evaluating Internet interventions to prevent or reduce heavy alcohol use among young adult veterans and to support the partners and spouses of active duty service members who are struggling with alcohol misuse.

FURTHER READING

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FEATURED EXPERTS



Robert S. Rudin is an information scientist at RAND. His primary focus is on HIT and how it can improve care coordination, performance measurement, clinical workflows, and clinical decision-making. Rudin received a Ph.D. in technology, management, and policy from the Massachusetts Institute of Technology.



Shira H. Fischer is an associate physician researcher at RAND. Her research goal is to improve patient safety and clinical outcomes through HIT. Fischer received an M.D. and Ph.D. in clinical and population health research from the University of Massachusetts Medical School and an MMSc in clinical informatics from Harvard Medical School.



Lori Uscher-Pines is a policy researcher at RAND. Her research interests include emergency preparedness, vaccine policy, and telemedicine. Uscher-Pines received a Ph.D. in health policy and management from the Johns Hopkins Bloomberg School of Public Health.



Ateev Mehrotra is an adjunct policy analyst at RAND, as well as an associate professor of health care policy and medicine at Harvard Medical School and a hospitalist at Beth Israel Deaconess Medical Center. His research focuses on the measurement of health care quality and efficiency and the impact of innovations in health care delivery design. He received an M.P.H. from the University of California, Berkeley, and an M.D. from the University of California, San Francisco.

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To learn more about RAND research on HIT, visit www.rand.org/topics/health-information-technology.

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