Improved Management of Chronic Disease Using Health Information Technology
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Abstract
Technology can be used effectively to improve chronic disease management, impacting health care costs, safety, and quality. The Agency for Healthcare Research and Quality has funded several studies to examine best practices in using technology to impact chronic disease management. These projects have employed a variety of technologies to improve care delivery processes, patient education, and continuity of care. Their stories contain valuable lessons for others looking to enhance chronic disease care.

Background
Chronic diseases are prevalent, costly, and preventable. Currently 90 million Americans suffer from one or more chronic diseases, and chronic diseases account for 7 of every 10 deaths. High prevalence translates into mounting costs, with chronic diseases consuming two thirds of total national health care expenditures. Although prevalent and costly, chronic diseases are preventable. Healthy choices can prevent the onset of chronic disease and control its progression.

Introduction
Since 2004, the Agency for Healthcare Research and Quality (AHRQ) has awarded over $166 million in funding for health information technology (IT). The AHRQ health IT portfolio consists of grants to plan, implement, and evaluate the impact of health IT on quality, safety, and efficiency of patient care.

AHRQ has also funded a National Resource Center for Health IT, created to facilitate cross-grantee learning to improve grantee success and inform the nation on key lessons from grantee projects. The Agency, via the National Resource Center, has established an infrastructure for collecting, analyzing, and disseminating best practices and lessons learned from its portfolio.

Methods
The National Resource Center identified grants in the AHRQ health IT portfolio that sought to improve chronic disease care with an IT intervention. We pulled the original grant application to AHRQ, subsequent interim status reports, and any available publications describing project outcomes. We also conducted phone interviews with project investigators to identify key challenges and lessons.

Results were divided into 3 categories: 1) Outcomes and Lessons, 2) Challenges, and 3) Value and Sustainability.

Results
Technology is a core component of the chronic care model that Wagner et al. believe can transform the quality of care for patients with chronic diseases. We found AHRQ-funded projects using a variety of technologies – electronic health record (EHR), clinical decision support (CDS), telehealth, and health information exchange (HIE) systems – to improve chronic disease management processes.

We also found a plethora of valuable lessons that AHRQ believes other institutions could use to improve the quality of care for patients with chronic diseases. Examples of lessons learned include: physicians are not the only health care professionals who can benefit from an informatics-based CDM solution; and alert fatigue can be avoided using creative workflow/process adjustments.

Conclusion
Practical lessons can be drawn from the experiences of the AHRQ health IT portfolio. Sharing these lessons will help the nation move forward with greater adoption and use of technology to improve the quality, safety, and efficiency of health care for all Americans.

References