



AHRQ Transforming Primary Care Grants

Transformed Primary Care: Care by Design™

Principal Investigator: Michael K. Magill, MD
Institution: University of Utah School of Medicine
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Overview of Transformation Efforts

In 2003, the 10 primary care clinics owned by the University of Utah introduced Care by Design™, a model for redesigned primary care that includes many elements of a patient-centered medical home and focuses on three principles: appropriate access, care teams, and planned care. The transformation at the University of Utah included expanded and new roles for support staff and redesigned workflow and care processes.

Implementation initially focused on improving access through same-day appointments. By 2006, the model incorporated team-based care and more comprehensive planned care. Care teams were used to enhance efficiency through better use of support staff time and skills, which allowed providers to focus more on relationships with patients. Using a care team was also intended to increase quality of care through improved communication and information sharing with patients. Medical assistants assumed increased responsibilities for many time-consuming tasks. Planned care included creating registries of chronic care patients and introducing reminders for preventive services to enhance continuity and integration of care.

Standardized order sets were included in the electronic medical record to improve follow-through on recommended care.

Senior leadership met monthly for day-long planning sessions during the implementation period, and physicians, administrators, and clinic staff met yearly for day-long training. Implementation efforts within each clinic were led by a two-person team, including a medical director and clinic manager. Components of Care by Design™ were introduced incrementally to avoid overwhelming clinicians with changes and modified over time to address the operational constraints of implementing practice transformation within working practices. Initially, senior leadership was prescriptive in its vision of practice transformation, adopting a hierarchical structure and processes. Over time, however, senior leadership allowed clinics to experiment with how to best adapt transformation principles to the clinical context. Whenever possible, implementation was standardized across sites.

Results of Transformation Efforts

The level of implementation was assessed using an internally developed tool that included 28 measures across the three Care by Design™ principles (appropriate access, care teams, and planned care). Each measure was evaluated using an ordinal scale, ranging from 0 (not implemented) to 4 (fully implemented). At the time of the evaluation in 2010, the mean overall implementation score across clinics was 1.94. Scores varied across individual elements of redesign and across clinics. Across all clinics,

Number and Type of Practices

This project included 10 university-owned primary care practices, with approximately 70 primary care practitioners and 100,000 patients overall, and three to nine practitioners per clinic.

Location

Utah

Transformational Elements

- Accessible Services
- Comprehensive Care
- Coordinated Care
- Health Information Technology
- Quality & Safety



the implementation score was 2.41 for care teams, 2.12 for appropriate access, and 1.08 for planned care. The differences in scores reflect that the main focus of implementation efforts was on care teams, and appropriate access was implemented first while planned care was implemented last. Clinic-specific scores varied from a high of 2.29 to a low of 1.65.

Key Impacts of Transformation

Quality of Care

- Multiple elements of Care by Design™ involving team function (such as contacting patients after hospital discharge, providing after-visit summaries, use of advance directives, and medication reconciliation) were associated with improvements in clinical quality. Team-based care and clinician continuity were also related to improved quality measures.

Patient and Provider Satisfaction

- Implementing team-based care improved both patient and provider satisfaction. Increasing the continuity of care from physicians and medical assistants improved patient satisfaction.
- An online patient portal, which allowed patients to view laboratory results and send secure email messages to their provider, empowered patients to be more involved with their own care.
- Some transformation elements required tradeoffs between patient and provider satisfaction; for example, a more efficient visit improved patient satisfaction because of reduced wait time, but decreased provider satisfaction because of less time spent with patients. Utilization

Costs

- Using a care team, particularly medical assistants in expanded roles, enabled providers to be more efficient. At the network level, staff cost per visit increased from \$56.24 in 2003 to \$64.51 in 2011—likely due to increases in staffing. However, staff cost per physician work Relative Value Unit (a unit that calculates the amount of effort expended by a physician in treating a patient) decreased from \$52.84 in 2003 to \$45.86 in 2011.
- Higher continuity of care at the clinic level was associated with lower overall health care costs. At the clinic level, a 10 percent increase in continuity of care was associated with a \$350 decrease in annual health care spending for patients with chronic conditions who were commercially insured. These cost savings were mainly due to reduced inpatient care, suggesting that higher continuity of care reduced inpatient hospitalization.

Challenges to Transformation

The traditional fee-for-service payment model made it a challenge to cover costs for the expanded health care team and services, including new roles for medical assistants, care managers, and clinical pharmacists. Frequent staff turnover posed a challenge in maintaining the care team model over time. In addition, changes in leadership led to changes in understanding of transformation efforts and maintaining these efforts as an organizational priority.



Lessons Learned and Implications for Others

- Providers and medical assistants reported that the following elements were essential for successfully managing the transformation process: having the right person do the right job, standardization with flexibility, reinforcement, proper training and practice, and working as a team.
- While patients generally liked the implementation of care teams, they also reported that it was important to them that the team support, rather than replace, their relationship with their primary care provider.
- It is important to monitor both the intended and unintended consequences of practice redesign. For example, standardized patient questionnaires were implemented for efficiency (i.e., to allow clinicians to spend more time with patients). However, patient satisfaction decreased with the use of the questionnaires, presumably because patients found them to be impersonal.



Emphasis on providing access can hurt continuity of care. Appointments can be made available more quickly, but not always with the patient's

For additional information about this grant, please visit:

<http://www.ahrq.gov/professionals/systems/primary-care/tpc/tpcbib.html#design>.