ANNALS OF FAMILY MEDICINE

Online Supplementary Material

Driscoll DL, Hiratsuka V, Johnston JM, et al. Process and outcomes of patient-centered medical care with Alaska Native People at Southcentral Foundation. *Ann Fam Med*. 2013;11(Suppl_1):S41-S49.

http://www.annfammed.org/content/11/Suppl_1/S41

Supplemental Appendix. Contextual Factors Relevant to Understanding and Transferring Findings From Implementing the Patient-Centered Medical Home With Alaska Native People

Relevant Attributes, Actions, Culture, Activation/Motivation	What Happened During Study (Internal Validity)	What Others Need to Know to Transfer Study Elsewhere (External Validity)
Public policy	SCF assumed responsibility for primary care services at the ANMC after more than 50 years of management by the IHS. Payers—including the IHS, Medicaid, Medicare, and independent insurers—represent a key stakeholder in the SCF transition.	Researchers should focus on both the inputs and outcomes associated with the transition to a PCMH.
Community	Alaska Native and American Indian people have persistently poorer health than the overall US population. Access to quality health care represents one component of a comprehensive program to reduce health disparities in Alaska Native and American Indian populations.	Historic and cultural experiences with health care models play a large role in patient acceptance of PCMH transitions.
Health care system	The SCF system received multipayer support for their transformation in the form of third-party billing (see payers above). The SCF system underwent a slow and gradual evolution, which continues, rather than discrete moment of transformation. The SCF system, called the Nuka System of Care by SCF, is based on several key characteristics of a PCMH, including patient match to a primary health care clinician (called *empanelment* by SCF), enhanced and often same-day access to health care (*open access*), and implementation of integrated primary care teams (*team-based care*).	Researchers doing retrospective, interrupted time series analysis of PCMH implementation should be aware of limitations when interpreting results. Clinical systems should be aware of the need for these up-front investments and be prepared to find additional revenue streams if necessary.

Copyright © 2013 The Annals of Family Medicine, Inc.

Relevant Attributes, Actions, Culture, Activation/Motivation	What Happened During Study (Internal Validity)	What Others Need to Know to Transport Study Elsewhere (External Validity)
Practice	Nurses in the SCF system changed from a specialist to a generalist model, working as part of a coordinated care team. Physicians were asked to work longer hours and delegate authority to nonphysician members of integrated clinical teams. Medical record coding protocols varied during the nearly 14-year study period at SCF. Health records were incomplete before 1998.	Acceptance of a patient-centered model of care by some clinicians is linked to loss of autonomy and status in the clinical system. System administrators should be prepared for tensions associated with an increased caseload for primary clinicians as patients move from emergency care to primary care.
Research team	Team was composed of both university- and clinic-based investigators. The research protocol received review and approval from multiple IRBs and tribal review processes.	Differences in perceptions between university- and clinic-based investigators can be mitigated by rigorous adherence to analytic protocols and assessment of interrater reliability.
Patients	Because of the extended period of the medical transition described in this study, recall bias was a challenge. The proportion of SCF patients in the region who seek health care from facilities other than SCF may vary over time as those with additional health coverage have other choices available to them.	Identifying the patient population served by a large health system is problematic.

IHS = Indian Health Service; PCMH = patient-centered medical home; SCF = Southcentral Foundation; IRB = institutional review board; ANMC = Alaska Native Medical Center.

Note: The following factors changed in important ways during the course of the study: (1) the manner in which the key components of the SCF model of care changed over the 14-year study period; (2) professional practice guidelines and public health messages varied during the study period; and (3) resources (eg, support staff, clinicians, technology) increased substantially during the study period.

Copyright © 2013 The Annals of Family Medicine, Inc.

Interpretation of Contextual Factors

The most important contextual elements that need to be considered when interpreting the outcomes of this study are the history of health disparities experienced by Alaska Native people, the transition in control of the primary care system at ANMC from IHS to Alaska Native control, and the investment in time and resources required to transform the system to a PCMH model.

To begin, Alaska Native and American Indian people have persistently poorer health than the overall US population. Access to quality health care represents one component of a comprehensive program to reduce health disparities in these populations. In 1998, SCF assumed responsibility for primary care services at the ANMC after more than 50 years of management by the IHS. This transition in responsibility was of great symbolic significance to the Alaska Native people, both tribal leaders and members, served by the system. Although detailed information about changes in the number of health care clinicians and other ICT members that accompanied implementation of the PCMH model are not available, SCF reported that health care service expenses increased by a factor of 3.8 from 1998 to 2009. In addition to increasing the workforce during this time, SCF also made major investments in the construction of new clinical facilities and in employee training and development.

The new model, called the Nuka System of Care by SCF, is based on several key characteristics of a PCMH, including patient match to a primary health care clinician (called *empanelment* by SCF), enhanced and often same-day access to health care (*open access*), and implementation of integrated primary care teams (*team-based care*).

In addition, the Alaska Native and American Indian residents of Southcentral Alaska can choose to receive their health care from a variety of sources, including tribally operated health facilities or private health care practices in Alaska, or IHS-managed facilities elsewhere in the United States. The proportion of SCF customer-owners seeking care outside of SCF thus may vary over time.

The use of secondary clinical and administrative data for research purposes created challenges as medical record-coding protocols varied during the study period (1996-2009). Incomplete data during the years before SCF assumed responsibility for health care for Alaska Native and American Indian people in Southcentral Alaska limited the number of years of data before the PCMH implementation that were available for analysis. The study team, which included representatives of SCF and the University of Alaska, Anchorage, navigated a complex series of independent institutional and tribal review processes as they adapted to these unexpected challenges in collecting and analyzing secondary data.

Although the key characteristics of the SCF model have not changed, the manner in which they are implemented has undergone substantial change over time in accordance with continuous quality improvement practices. In addition to these changes, both professional practice guidelines and public health messages varied over the 14 years of the study period. It is difficult to estimate the effect these changes had on health care use by SCF customer-owners and to identify exact time points to use for an interrupted time series analysis The SCF model of care involved substantial increases in resources (eg, support staff, clinicians, technology) over the 14-year study period. These increases represent an important consideration in attempts to replicate this model of care in other settings.

Copyright © 2013 The Annals of Family Medicine, Inc.