Research Report

Evaluation of CMS's Federally Qualified Health Center (FQHC) Advanced Primary Care Practice (APCP) Demonstration

Final Report – Appendix A

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Preface

The RAND Corporation has conducted an independent evaluation of the Federally Qualified Health Center Advanced Primary Care Practice (FQHC APCP) Demonstration for the Centers for Medicare and Medicaid Services (CMS). The evaluation studied the processes and challenges involved in transforming FQHCs into patient-centered medical homes (PCMHs) and assessed the effects of the FQHC APCP Demonstration model on access, quality, and cost of care provided to Medicare and Medicaid beneficiaries served by FQHCs.

This final report, written by RAND, describes the approach RAND took to its mixed-methods evaluation and the final results of these analyses. This is the final of three annual reports that RAND prepared during the course of the evaluation. The contents and format of this report were designed to address three key policy questions relevant to FQHC APCP Demonstration and its evaluation.

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Contents

Exhibits

Abbreviations

AAAHC	Accreditation Association for Ambulatory Health Care
ACA	Affordable Care Act
ACO	accountable care organization
ACS	American Community Survey (2005–2009 five-year files)
AHRQ	Agency for Healthcare Research and Quality
AIR	American Institutes for Research
APCP	Advanced Primary Care Practice
ARRA	American Recovery and Reinvestment Act
BMI	body mass index
CAHPS	Consumer Assessment of Healthcare Providers and Systems
CASE	clinician and staff experience
CEO	chief executive officer
CHIP	Children's Health Insurance
CMS	Centers for Medicare and Medicaid Services
ED	emergency department
EHR	electronic health record
ER	emergency room
FFS	fee-for-service
FQHC	federally qualified health center
FTE	full-time equivalent
FY	fiscal year
GHC	Group Health Cooperative
GPRA	Government Performance and Results Act
HCC	hierarchical condition category
HCCN	Health Center Control Networks

HCH	State of Minnesota Health Care Homes
HEDIS	Healthcare Effectiveness Data and Information Set
HIT	health information technology
HMO	health maintenance organization
HPSA	Health Professional Shortage Area
HRSA	Health Resources and Services Administration
ISS	Interactive Survey System
JC	Joint Commission
LPN	licensed practical nurse
MAPCP	Multi-Payer Advanced Primary Care Practice
MDH	Minnesota Department of Health
MDM	Master Data Management System
MEMO	Minimizing Errors/Maximizing Outcomes
NCQA	National Committee for Quality Assurance
NDP	National Demonstration Project
NP	nurse practitioner
NPPES	National Plan & Provider Enumeration System
OR	odds ratio
PA	physician's assistant
PBPQ	per beneficiary per quarter
PCA	primary care association
PCC	primary care clinic
PCMH	patient-centered medical home
PCP	primary care provider
PCPCC	Patient-Centered Primary Care Collaborative
PHQ-4	Four-Item Patient Health Questionnaire
PI	performance improvement

PPC-PCMH	Physician Practice Connections—Patient-Centered Medical Home
QA	quality assurance
QCA	Qualitative Comparative Analysis
QI	quality improvement
RAS	Readiness Assessment Survey
RFI	requirements for improvement
RN	registered nurse
SD	standard deviation
SE	standard error
SNMH	Safety Net Medical Home
TA	technical assistance
TQM	total quality management
UDS	Uniform Data System

A1. Summary of the Current State of Knowledge of FQHCs and PCMHs

This appendix provides background information about federally qualified health centers (FQHCs) and patient-centered medical homes (PCMHs). We also provide descriptions of different PCMH recognition programs and how they are attained.

The Term "Medical Home" and Its Evolution

The term "medical home" was first introduced by the American Academy of Pediatrics in 1967 to describe an accessible repository for the medical records of children with complex medical needs (Sia et al., 2004). Although the term "medical home" has persisted, its definition has changed. Over the past decade, the medical home concept has expanded to two distinct constructs: *models* for delivery of primary care, and *interventions* intended to improve primary care delivery and measures of technical quality, patient experience, efficiency, and professional satisfaction. Both of these categories include multiple definitions of what "medical home" actually means. In other words, without more detail, nobody should assume that studies that use the term "medical home" examine the same care model or intervention (or, indeed, that such studies are directly comparable). Multiple "medical home" models exist, with competing criteria for recognition, and "medical home" interventions (Burton, Devers, & Berenson, 2012) encompass many different efforts to improve patient care through increased investment in primary care practices (Friedberg, Lai, et al., 2009). Beginning in 2004, primary care professional societies produced a series of reports, most notably the American Academy of Family Physicians' "Future of Family Medicine" (Martin, Avant, & Bowman, 2004) and the American College of Physicians' *The Advanced Medical Home* [2006], which were then synthesized into the *Joint Principles of the Patient-Centered Medical Home* (National Center for Medical Home Implementation, 2007).

The Joint Principles, which combine elements of both models and interventions without clearly separating these concepts, consist of two inputs and five desired outputs of medical homes. The first input (an aspect of the care *model*) is a "care team led by a personal physician," and the second (an ingredient of an *intervention*) is payment reform consisting of the following additions to fee-for-service (FFS) payment: (1) payment for work that falls outside face-to-face visits, including payment for care coordination and remote data monitoring (e.g., monitoring of test results); (2) payment to support investment in capabilities that will improve quality and enhance communication access (e.g., via telephone or secure email); and (3) incentive payments to improve the quality and reduce the costs of care (e.g., allowing primary care practices to share in savings resulting from reduced hospitalizations). The common thread in these payment

reforms is that they reduce the incentive to perform face-to-face visits with patients, relative to the other critical services that constitute comprehensive primary care—an approach some have called "comprehensive payment for comprehensive care" (Goroll et al., 2007). Nearly all medical home interventions feature at least one element of payment reform that is intended to reduce the percentage of practice revenue tied to FFS patient visits (Bitton et al., 2010; Edwards et al., 2014).

The five desired outputs articulated in the Joint Principles are (1) first-contact, continuous, and comprehensive care; (2) care that is coordinated across the health care system and community; (3) culturally and linguistically appropriate care; (4) safe, high-quality, evidence-based care; and (5) enhanced access to care (including between-visit care). As with the payment reform component of the Joint Principles, these outputs are consistent with Barbara Starfield's recognition that comprehensive primary care extends beyond office visits (Starfield et al., 2005). Starfield posited that primary care consists of serving four cardinal functions for patients: (1) first-contact care for new health problems; (2) comprehensive care for the majority of health conditions; (3) long-term, person-focused care; and (4) care coordination across providers when multiple providers are necessary. Although there is evidence that improving the ability of primary care providers to deliver all four cardinal functions is associated with better health outcomes and lower costs of care, most of this evidence precedes the publication of the Joint Principles and the initiation of medical home pilots (Friedberg, Hussey, et al., 2010).

Goals of Medical Home Models

The Patient-Centered Primary Care Collaborative (PCPCC), a leading national medical home advocacy organization, expects medical homes to lead to cost savings, better health outcomes, and better patient experiences (PCPCC, 2009). Cost savings are expected to result from better coordination of care, which may reduce the frequency of unnecessary emergency department (ED) visits and hospitalizations and other changes in utilization (Rosenthal, Beckman, et al., 2010). Health outcomes may improve as a consequence of higher-quality primary care. Both the Joint Principles and operational definitions of the medical home (discussed later) focus on adopting new tools and processes that will allow more reliable delivery of evidence-based care (Friedberg, Lai, et al., 2009). In addition, informed by earlier initiatives to improve primary care, some proponents also expect medical homes to improve primary care physicians' professional satisfaction and consequently to expand the primary care workforce (Marsteller et al., 2010; Friedberg, Hussey, et al, 2010).

Operationalizing Medical Home Models

The Joint Principles and earlier medical home reports describe an idealized vision of primary care (Future of Family Medicine Project Leadership Committee, 2004; American College of Physicians, 2006; National Center for Medical Home Implementation, 2007), but these

documents do not offer concrete steps to create practices that conform to a medical home model. To fill this vacuum, medical home pilots have created their own interventions for transforming primary care practices, often requiring participating practices to receive National Committee for Quality Assurance (NCQA) Physician Practice Connections—Patient-Centered Medical Home (PPC-PCMH) recognition. The PPC-PCMH, in both its original and revised versions, specifies a number of tools (e.g., electronic health records [EHRs]) and activities (e.g., providing patient education materials, tracking referrals) that practices must adopt to attain recognition as medical homes (NCQA, 2008, 2011, 2014). Although NCQA did not intend the PPC-PCMH as such, its widespread use by medical home pilots has made it the predominant de facto standard for determining whether a given practice conforms to a medical home model (Berenson et al., 2011).

The original PPC-PCMH was criticized for overemphasizing the possession of EHRs and for incompletely matching the Joint Principles (O'Malley et al., 2008; Carrier et al., 2009; Nutting, Miller, et al., 2009). In 2011, NCQA released a revision of the PPC-PCMH that expanded the criteria for medical home recognition and shifted the focus more on performance of patient-centered care management processes (such as previsit planning for complex patients) than on the possession of specific tools (NCQA, 2011). Since then, the NCQA made further enhancements with the 2014 PCMH recognition program. The latter is intended to align with meaningful use criteria and includes Stage 2 criteria (NCQA, 2014).

Evidence Reported from Early Medical Home Pilots

Early evidence reported from medical home pilots showed modest evidence regarding the effects of transforming primary care practices into medical homes (Friedberg, Lai, et al., 2009; Berenson et al., 2011; Farmer et al., 2011; Peikes, Zutshi, et al., 2012). Three formally evaluated early medical home pilots have produced longitudinal results: the TransforMED National Demonstration Project (NDP), Geisinger Health System, and the Group Health Cooperative.

TransforMED NDP

The major lesson from this pilot was that transforming independent primary care practices was more difficult than anticipated. In their preliminary qualitative analyses, TransforMED's evaluators found that adopting EHRs produced significant disruptions to practice workflow, and practice staff exhibited change fatigue (Nutting, Miller, et al., 2009). Final results of the pilot revealed modest improvements in process measures of the quality of preventive and chronic-disease care, but patients reported worsening overall experiences with the pilot practices (Jaen, Ferrer, et al., 2010). Effects on health care utilization and costs were not measured. To improve the effectiveness of future medical home pilots, the TransforMED NDP evaluators recommended that pilots run for more than two years and include greater resources to support practice transformation, including payment reform.

Geisinger Health System

Among Medicare beneficiaries, implementation of Geisinger's ProvenHealth Navigator medical home pilot was associated with an 18-percent reduction in hospital admissions and a 36-percent reduction in hospital readmissions over a two-year period. However, overall per-patient-per-month costs of care were not significantly reduced when evaluation methods appropriately accounted for practice-level clustering of observations (Gilfillan et al., 2010). Though a recently published evaluation of this pilot did report significant cost reductions (Maeng et al., 2012), this particular analysis did not account for nonindependence of patients within practices—effectively ignoring clustering, which should not be ignored in evaluations of practice-level interventions (Peikes, Dale, et al., 2011; Peikes, Genevro, et al., 2011). Therefore, the validity of this later report of findings from Geisinger is questionable. Effects on the quality of care and patient experience were not reported in any publication from the Geisinger medical home pilot.

Group Health Cooperative

One year after medical home implementation, the Group Health Cooperative (GHC) medical home pilot produced better patient experience ratings, improved performance on a single global composite measure of quality (combining processes and intermediate outcomes of care), and reduced levels of provider and staff burnout (Reid, Fishman, et al., 2009). After two years, this pilot demonstrated persistent improvements in the outcomes seen in the first year, as well as reductions in ED visits (29-percent decrease), hospitalizations (6-percent decrease), and overall costs of care ($10.30 per patient per month in savings) (Reid, Coleman, et al., 2010).

At this time, we do not have enough data to determine which formulations of the medical home (and which intervention settings) are most effective in producing desired outcomes. However, with dozens of medical home pilots now under way, the body of evidence on the effects of transforming primary care practices into medical homes will dramatically expand over the next few years.

More-Recent Medical Home Pilots

More than 100 medical home pilots (Edwards et al., 2014) have been initiated since the publication of the Joint Principles and since the studies examined in two systematic reviews (Peikes, Zutshi, et al., 2012; Jackson et al., 2013) funded by the Agency for Healthcare Research and Quality (AHRQ). Here, we summarize the evaluation results from a selection of these pilots; a comprehensive systematic literature review is beyond the scope of this report. In this section, we distinguish evaluations of medical home models (i.e., cross-sectional or longitudinal studies comparing practices that are more "medical-homelike" to those that are less so) from evaluations of medical home interventions (i.e., longitudinal studies that compare practices exposed to a particular intervention to those not exposed to the exact same intervention) (Friedberg, 2016). We note here that the two AHRQ-funded evidence reviews include only studies of medical

homes as interventions (Peikes, Zutshi, et al., 2012; Jackson et al., 2013), although many of these interventions predated the Joint Principles.

Blue Cross Blue Shield of Michigan

Two evaluations of medical homes *as models*, using criteria developed by Blue Cross Blue Shield of Michigan, included more than 2,000 Michigan primary care practices over a three-year period (Paustian et al., 2014; Alexander et al., 2015). These evaluations found that medical-homeness was associated with better quality of care on composite quality measures, as well as lower utilization and costs of care. Patient experience of care was not assessed.

Pennsylvania Chronic Care Initiative

Two evaluations of different interventions in two regions of the Pennsylvania Chronic Care Initiative produced substantially different results. In the southeast region, the intervention was associated with improvement in only one measure of diabetes quality of care and no changes in utilization or costs of care (Friedberg, Schneider, et al., 2014). In the northeast region, the intervention was associated with improvement in multiple quality measures and reductions in rates of hospitalization and ED visits (Friedberg et al., 2015). There were multiple differences between the southeast and northeast Pennsylvania interventions (notably, but not limited to, the inclusion of a shared savings payment model in northeast but not southeast Pennsylvania, as well as lesser emphasis on early NCQA recognition in the northeast region) and the contexts in which these interventions were applied (Friedberg, Sixta, & Bailit, 2015).

Three evaluations of medical home *models* among practices in the southeast region of Pennsylvania found reductions in utilization of hospital and ED visits and adjusted costs of care among patients with greater comorbidities but not among the full population of patients treated by these practices (Higgins et al., 2014; Wang et al., 2014; David et al., 2015). None of these studies evaluated the quality of care or identified an intervention to explain why some practices adopted medical home models and others did not. In particular, none evaluated the Pennsylvania Chronic Care Initiative as an intervention (i.e., compared *all* of the practices participating in the southeast Pennsylvania Chronic Care Initiative—and no other practices designated as "medical homes"—to practices not participating in the intervention).

Hudson Valley

An evaluation of primary care practices in the Hudson Valley found that NCQA medical home recognition was associated with better quality of care on four of ten investigated measures, independent from use of an electronic health record (EHR) (Kern, Edwards, & Kaushal, 2014). In a pre-/postrecognition study of patient experience of care conducted among a subset of Hudson Valley practices receiving NCQA medical home recognition only (and no practices not receiving such recognition), ratings of access to care (but no other investigated dimension of patient experience) improved significantly (Kern, Dhopeshwarkar, et al., 2013).

A follow-up evaluation of the Hudson Valley practices found that over a five-year period, 12 practices designated as medical homes had improvements on four of eight quality measures; increases in primary care office visits; and decreases in specialist visits, laboratory and radiologic tests, and hospitalizations and rehospitalizations, relative to comparison practices not designated as medical homes in Year Three of the study (medical home status was not observed for comparison practices in Years Four or Five) (Kern, Edwards, and Kaushal, 2016). While these Hudson Valley studies highlighted medical home recognition (one way a medical home *model* can be defined) as the comparison criterion, they also involved *interventions* that were applied to the "medical home" practices (and presumably not to the comparison practices), such as technical assistance and shared savings arrangements in Year Five. As such, these studies might be better categorized as evaluations of medical home interventions than medical home models.

Other Single-State Medical Home Interventions

Medical home interventions with relatively modest numbers of participating practices in Rhode Island and Colorado produced mixed results. In Rhode Island, exposure to the medical home intervention was associated with a reduction in ambulatory care–sensitive ED visit rates (and not other measure of quality or utilization) (Rosenthal, Friedberg, et al., 2013). In Colorado, intervention exposure was associated with reductions in all-cause ED visit rates and improvements in some quality measures, but significant worsenings in other quality measures (Rosenthal et al., 2015).

General Limitations of Existing Knowledge on the Effects of Medical Home Interventions

Over the past decade, the medical home concept has evolved from a centralized depository for medical records to a complex, multifaceted, primary care intervention intended to improve health outcomes, enhance patient and provider experience, and contain health care costs. The idea of medical homes has enthusiastic support, and there is generally evidence that practices with medical home *models* deliver care that is of higher technical quality and possibly of higher efficiency (*i.e.,* lower unnecessary utilization and lower cost) than practices that are less like medical homes—although the definition of "medical home model" is not consistent across studies, with some using NCQA recognition as a measure of medical homeness and others using alternative criteria. However, there is mixed longitudinal evidence to date that medical home *interventions* have produced the desired outcomes, and different medical home interventions applied to practices in different contexts have produced widely divergent results—even within the same overall pilot (i.e., with the same general approaches and intervention personnel). To our knowledge, only one medical home pilot—the GHC's single-practice demonstration—has succeeded in achieving all of these goals, but concerns about systematic confounding in this demonstration may limit the validity of its evaluation (Peikes, Zutshi, et al., 2012). Evidence of

longitudinal effects of medical home interventions on patients' experiences of care is especially scant.

More than 100 medical home pilots are currently under way across the country. Some are quite large, and all incorporate unique combinations of medical home elements. As results from these pilots accumulate, the evidence base on the effects of medical home models and interventions will grow. The diversity of medical home formulations may allow identification of medical home models and interventions that most reliably improve patient care.

Attainment of Different Forms of PCMH Recognition

Because applying for PCMH recognition by NCQA was a requirement of the demonstration, RAND completed many analyses based on level of NCQA recognition attained. As a sensitivity analysis, the team also looked at how different types of recognition are attained. These included recognition by the AAAHC, the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), the state of Oregon's Patient Centered Primary Care Home program, and State of Minnesota's Health Care Home (HCH) program.

NCQA

Eligibility

Sites are eligible to apply for NCQA PCMH recognition if they "provide first contact, continuous, comprehensive, whole person care for patients across the practice." This is based on principles developed by the primary care medical societies, which include:

- Whole-person care
- A personal clinician who provides continuous and comprehensive care
- Care coordination across all aspects of care
- Team-based care (NCQA, undated-a).

Currently, practices may apply if they are physician-led or nurse-led. Any practice that demonstrates that they meet the requirements for "whole person care" may apply for recognition, even if they are not a traditional primary care clinic.

Method for Application

Sites applying for NCQA recognition must purchase a license to use the online Interactive Survey System (ISS), which is the program that NCQA uses to collect information for PCMH recognition. The pricing of the ISS license varies by the size of the practice and whether they are part of an organization entitled to a discount. For the FQHC demonstration, sites were able to have this cost covered by HRSA. Once they have that license, they can submit an online application for recognition. NCQA reviews that application and links the application to the ISS.

Once that is completed, sites are able to submit all of their recognition materials through the ISS for NCQA review (NCQA, undated-b).

Standards for Recognition

Sites that apply for NCQA PCMH recognition may receive one of four outcomes:

- Denial: sites that receive fewer than 35 out of 100 points on the ISS. These are sites that have not demonstrated any real transformation to PCMH.
- Level 1: sites that receive 35–59 points on the ISS.
- Level 2: sites that receive 60–84 points on the ISS.
- Level 3: sites that receive 85–100 points on the ISS.

For all levels of recognition, sites must pass all six of the "must-pass elements" (patient-centered appointment access, practice team, use data for population management, care planning and self-care support, referral tracking and follow-up, implement continuous quality improvement) with a score of 50 percent or greater (NCQA, undated-c).

Exhibit A1.1. List of NCQA Standards with Point Levels and Must-Pass Indicators

Points	Standard/Element	Must-Pass? (50% Score)
10	**PCMH 1: Patient-Centered Access**	
4.5	Element A Patient-Centered Appointment Access	**Yes**
3.5	Element B 24/7 Access to Clinical Advice	No
2	Element C Electronic Access	No
12	**PCMH 2: Team-Based Care**	
3	Element A Continuity	No
2.5	Element B Medical Home Responsibilities	No
2.5	Element C Culturally and Linguistically Appropriate Services (CLAS)	No
4	Element D The Practice Team	**Yes**
20	**PCMH 3: Population Health Management**	
3	Element A Patient Information	No
4	Element B Clinical Data	No
4	Element C Comprehensive Health Assessment	No
5	Element D Use Data for Population Management	**Yes**

4	Element E Implement Evidence-Based Decision Support	No
20	**PCMH 4: Care Management and Support**	
4	Element A Identify Patients for Care Management	No
4	Element B Care Planning and Self-Care Support	Yes
4	Element C Medication Management	No
3	Element D Use Electronic Prescribing	No
5	Element E Support Self-Care and Shared Decision Making	No
18	**PCMH 5: Care Coordination and Care Transitions**	
6	Element A Test Tracking and Follow-Up	No
6	Element B Referral Tracking and Follow-Up	Yes
6	Element C Coordinate Care Transitions	No
20	**PCMH 6: Performance Measurement and Quality Improvement**	
3	Element A Measure Clinical Quality Performance	No
3	Element B Measure Resource Use and Care Coordination	No
4	Element C Measure Patient/Family Experience	No
4	Element D Implement Continuous Quality Improvement	Yes
3	Element E Demonstrate Continuous Quality Improvement	No
3	Element F Report Performance	No
Not Scored	Element G Use Certified EHR Technology	No

SOURCE: NCQA, undated-c.

Accreditation Association for Ambulatory Health Care

Eligibility

Sites are eligible to apply for AAAHC medical home recognition if they meet the following requirements. The sites must:

- Have been providing health care for a minimum of six months
- Be legally able to provide health care
- Be in compliance with all applicable federal, state and local laws
- Have the required licenses in their state
- Have a licensed professional providing health services (including doctors of medicine, doctors of osteopathy, doctors of dental surgery, doctors of dental

medicine, doctors of podiatry, chiropractic doctors, advanced practice registered nurses, and behavioral health professionals)
- Share all relevant facilities and patient records among all members of the organization
- Follow all Equal Employment Opportunity Commission policies
- Submit all relevant materials and payment for the recognition
- Provide complete and accurate information throughout the accreditation process (AAAHC, undated).

Method for Application

AAAHC accreditation is completed through an onsite survey where survey conductors are active, practicing health care administrators or providers. Sites are told in advance what materials will be needed as part of the survey. However, the survey conductors do reserve the right to request additional information during the survey. At the end of the onsite survey, the survey conductors present the findings to site personnel, though they do not make official certification decisions at that point in the process. However, this is an opportunity for staff to present additional information or rebut the findings. The final accreditation decision is made by AAAHC staff and their accreditation committee once they have reviewed the survey and the site is then notified in writing about the final decision (AAAHC, 2013a).

Standards for Recognition

Sites may receive accreditation for a three-year term if they meet all standards and the AAAHC believes they will be able to consistently provide high quality of care. Sites that do not completely meet requirements may receive a three-year Plan for Improvement which needs to be verified by another survey in six months or so. Sites that do not meet the requirements for accreditation are denied accreditation (AAAHC, 2013b).

Exhibit A1.2. Standards for AAAHC Accreditation

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1. Patient Rights, Responsibilities, and Empowerment

A. Patients are treated with respect, consideration, and dignity
B. Patients are provided appropriate privacy
C. Patient disclosures and records are treated confidentially, and patients are given the opportunity to approve or refuse their release, except when release is required by law
D. Patients are provided, to the degree known, complete information concerning their diagnosis, evaluation, treatment, and prognosis; when it is medically inadvisable to give such information to a patient, the information is provided to a person designated by the patient or to a legally authorized person
E. Patients are fully empowered to participate in decisions involving their health care, except when such participation is contraindicated for medical or legal reasons
F. Patients and staff are provided with information and explanation regarding medical home care
G. Patients are informed of their obligations within the medical home
H. Patients are informed about procedures for expressing suggestions, concerns, complaints, and grievances, including the processes that are required by state and federal regulations

2. Medical Home Governance and Administration

A. Defining the medical home mission, goals, objectives, and strategic plans
B. Establishing an organizational infrastructure and specifying functional relationships among the various components of the medical home
C. Adopting policies and procedures necessary for the orderly conduct of the medical home
D. Adopting policies to ensure that medical home health care professionals and staff are qualified to function in their current role
E. Ensuring that the organization has an active, integrated, and peer-based quality improvement program
F. Ensuring effective communication throughout the organization
G. Determining a policy on the medical home rights and responsibilities of patients
H. Establishing a clinical record system that accurately documents individual patient visits, treatment plans, referrals, and consultations
I. Performing administrative responsibilities such as enforcing policies, planning for the needs of the organization, ensuring accountability, etc.

3. Medical Home Relationship

A. The medical home provides services within a team framework, and that “team” provider concept has been conveyed to the patient
B. The patient can identify his/her medical home team members
C. The medical home explains information in a manner that is easy to understand
D. The medical home listens carefully to the patient
E. The medical home communicates effectively with the patient about his/her health care
F. The medical home provides instructions for taking care of individual health concerns
G. The medical home documents important facts about the patient’s health history
H. The medical home spends sufficient time with the patient
I. The medical home is as thorough as the patient feels is needed
J. The patient is kept informed with regard to his/her appointment time, if delayed
K. The medical home addresses specific principles to prevent illness
L. The medical home interacts with the patient about making lifestyle changes to support wellness.
M. The medical home inquires as to the patient’s emotional health

N. The medical home inquires as to the patient's mental health status
O. The family, responsible party, or caregiver is included in patient care decisions, treatment, and education, as appropriate
P. The medical home treats its patients with respect and cultural sensitivity
Q. When the need arises, reasonable attempts are made for health care professionals and other staff to communicate in the language or manner primarily used by patients

4. Medical Home Accessibility

A. The medical home establishes patient-driven access to care
B. The medical home makes reasonable provision to accommodate disabled patients.
C. Information on access to medical home services is obtained on a regular basis and utilized to meet patient needs
D. The medical home ensures on-call coverage (prearranged access to a clinician) when it is not open
E. Health information technology is continually assessed as a means to enhance electronic and telephone communications, such as secure messaging, scheduling, and patient education

5. Medical Home Comprehensiveness of Care

A. The medical home scope of service includes, but is not limited to: wellness care, health risk appraisal, preventive care, acute illness and injury care, chronic illness management, and end of life care
B. Patient education and self-management tools are utilized and documented
C. Health education is individualized and disease prevention information is based on the needs of the patient
D. The medical home assures that the patient has access to appropriate and indicated diagnostic testing and treatment services
E. The medical home has knowledge of community and alternate resources necessary to support the needs of the patient and his/her family

6. Medical Home Continuity of Care

A. The medical home has knowledge and provides coordination of care
B. When the patient is transferred from the medical home to the care of another health care professional, arrangements are completed prior to transfer and clinical information is transferred
C. A summary of significant past and current diagnoses is present in the clinical record
D. After-hours encounters are documented in the clinical record
E. Missed appointments are documented in the clinical record and managed appropriately depending on the patient's care needs and diagnosis
F. Hospitalizations are documented in the clinical record
G. Transition of care (e.g., pediatric to adult or adult to geriatric) is proactively planned, coordinated, and documented in the clinical record when indicated or when appropriate
H. Patients are informed as quickly as possible for follow-up regarding significant findings and laboratory or diagnostic imaging results
I. When hospitalization is indicated, the medical home has an arrangement with a receiving hospital, or the provider has medical staff privileges at the receiving hospital
J. A majority of medical appointments are with the same medical home team

7. Medical Home Clinical Records and Health Information

A. All patient information is reviewed and incorporated into the patient's record in a timely manner.
B. Clinical and health information relevant to the patient is readily available
C. A summary of significant past and current problems and diagnoses is documented in the clinical record to facilitate the continuity of care
D. Each patient encounter includes entries in a clinical record for the visit
E. The organization ensures that timely summaries or pertinent records necessary for continuity

of patient care are obtained from other (external) provider(s) or organization(s) and incorporated into the patient's clinical record

8. **Medical Home Quality**
   - A. Medical home health care professionals and staff supporting the organization have the necessary training and can meet patient needs
   - B. The medical home, with active participation of patients and professional staff, conducts ongoing, comprehensive self-assessments of the quality of care it provides
   - C. The medical home incorporates current, evidence-based guidelines and performance measures in delivering clinical services
   - D. The organization facilitates the provision of high-quality health care by monitoring appropriate care
   - E. The quality improvement (QI) program addresses clinical (including patient outcomes and safety issues), administrative, and cost-of-care performance issues
   - F. The organization conducts specific quality improvement studies to support the goals of the written QI program
   - G. The medical home's QI program includes at least one study every three years on each of the following topics: Patient/primary care provider relationship, accessibility to care, comprehensiveness of care, continuity/coordination of care, clinical study

SOURCE: AAHC, undated-a.

Joint Commission on Accreditation of Healthcare Organizations

Eligibility

Ambulatory health care clinics may apply for JCAHO Ambulatory Health Care accreditation if they meet the eligibility requirements, which include:

- Being located in the United States
- Having the required facility license to practice as required by state and federal law
- Being able to demonstrate continuous quality improvement and monitoring
- Being able to clearly identify the types of health care provided
- Having a minimum of ten patients with at least two actively seeking care at the time of the survey
- Having the required practitioner licenses as required by state and federal law (JCAHO, undated-a).

Method for Application

JCAHO accreditation is done through an on-site survey by employees of the Joint Commission. Sites are required to apply for an on-site survey by filling out an online application and paying a $1,700 deposit. Once this is done, the Joint Commission assigns survey conductors and lets the sites know how long the survey will take once they are on site, though a typical survey takes two days. Once an accreditation decision is made, that decision is typically applicable for three years. Additionally, sites are given a summary of findings, including requirements for improvement (RFIs) which must be met within a given period of time to maintain accreditation. Between surveys, sites must also complete a focused standards assessment within 12–24 months to ensure that they remain in compliance. They may also

participate in optional "touchpoint conference calls" annually as part of the continuous improvement process. The overall cost of the accreditation depends on the size and type of the facility (Joint Commission, 2015).

Standards for Recognition

Sites that complete the on-site survey process are granted one of six accreditation decisions:

- Accredited: given when the site is in compliance with all standards at the time of the on-site survey or has completed all RFIs from that original survey.
- Preliminary accreditation: given when a site has demonstrated compliance with the standards in their original online survey but has not completed full accreditation yet.
- Accreditation with follow up survey: given when the site has failed to correct all RFIs after two opportunities or there is demonstrated need for continued monitoring to ensure that improvements continue.
- Contingent accreditation: given when sites have demonstrated sufficient corrective action for a threat to health or safety, the organization has not resolved all requirements for a follow on survey after two opportunities, or there is a possibility of fraud.
- Preliminary denial of accreditation: given when sites demonstrate an immediately threat to health or safety of patients or staff, patients are at risk due to an unlicensed provider, the organization doesn't have a required license, or the Joint Commission believes a document in the survey may have been falsified.
- Denial of accreditation: given when sites do not submit payment, do not allow the on-site survey, or do not resolve a contingency (Source: Joint Commission, 2016).

Exhibit A1.3. Standards for JCAHO Accreditation

1. Patient-Centered Care

A. Patient-selected Primary Care Clinician (PCC)
B. PCC and interdisciplinary team work in partnership with the patient
C. Consideration of the patient's cultural, linguistic, language, and educational needs and preferences
D. Patient involvement in establishing the treatment plan
E. Support for patient self-management

2. Comprehensive Care

A. The provision of acute, preventive, and chronic care
B. Provision of continuous and comprehensive care
C. Team-based approach and the use of a multidisciplinary team to provide care
D. Use of internal and external resources to meet patient needs
E. PCC has the educational background and broad-based knowledge and experience necessary to handle most medical needs of the patient and resolve conflicting recommendations for care

F. PCC works collaboratively with an interdisciplinary team

G. Care that addresses various phases of a patient's lifespan, including end-of-life care

H. Disease management

3. Coordinated Care

A. Use of internal and external resources to meet patient needs

B. Responsibility for care coordination

C. Team-based approach

4. Superb Access to Care

A. Enhanced access, defined as responsiveness to patients' preferences regarding access, including: timely response to and shorter wait times for urgent needs; flexible appointment hours and days of service; telephonic or electronic access to a member of the care team; and alternative methods of communication such as email

B. Availability 24 hours a day, 7 days a week

C. Access for non-visit related patient needs

D. Access for patients with special communication needs

5. A Systems-Based Approach to Quality and Safety

A. Population-based care

B. Use of health information technology (HIT), including electronic prescribing

C. PCC and team members function within their scope of practice and in accordance with law and regulation and privileges granted

D. Use of evidence-based medicine and decision support tools

E. The provision of care to a panel of patients

F. Patient involvement in performance monitoring and improvement efforts

SOURCE: Joint Commission, 2016.

State of Oregon Patient-Centered Primary Care Home Program

Eligibility

Any clinic that is providing comprehensive primary care and can meet the Oregon standards for the Patient-Centered Primary Care Home program may apply for recognition. The size and type of clinic is not relevant if they can meet the standards (Oregon, undated-a). There are several incentives in place to encourage sites in Oregon to become recognized including from the Public Employees Benefit Board, the Coordinated Care Organizations, and Aetna (Oregon, undated-b).

Method for Application

Sites apply for recognition through the state of Oregon using an online application tool. Prior to application, clinics can fill out a self-assessment tool to assess their readiness for the full application. This allows them to estimate the tier of recognition they would likely be able to achieve. After that process, the site then fills out the full electronic application. Once that is

complete, the Oregon Health Authority reviews the documentation and notifies the site in writing of the result within 60 days (Oregon, undated-a).

Standards for Recognition

There are three levels of recognition for the State of Oregon recognition. Tier 1 is for sites that attain 30–60 points on the survey and pass all ten must-pass elements. Tier 2 is for sites that attain 65–125 points and pass all ten must-pass elements. Tier 3 is for sites that attain 135 or more points and pass all ten must-pass elements.

Exhibit A1.4. Standards for Oregon with Point Levels and Must-Pass Indicators

Standard	Must Pass?	Points
CORE ATTRIBUTE 1: ACCESS TO CARE—"Health care team, be there when we need you."		
Standard 1.A In-Person Access		
1.A.1 PCPCH surveys a sample of its population on satisfaction with in-person access to care.		5
1.A.2 PCPCH surveys a sample of its population using one of the Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey tools on patient satisfaction with access to care.		10
1.A.3 PCPCH surveys a sample of its population using one of the CAHPS survey tools, and meets a benchmark on patient satisfaction with access to care.		15
Standard 1.B After Hours Access		
1.B.1 PCPCH offers access to in-person care at least 4 hours weekly outside traditional business hours.		5
Standard 1.C Telephone and Electronic Access		
1.C.0 PCPCH provides continuous access to clinical advice by telephone.	Yes	0
1.C.1 When patients receive clinical advice via telephone, these telephone encounters (including after-hours encounters) are documented in the patient's medical record.		5
Standard 1.D Same Day Access		
1.D.1 PCPCH provides same day appointments.		5
Standard 1.E Electronic Access		
1.E.3 Using a method that satisfies either Stage 1 or Stage 2 meaningful use measures, the PCPCH provides patients with an electronic copy of their health information upon request.		15
Standard 1.F Prescription Refills		
1.F.1 PCPCH tracks the time to completion for prescription refills.		5
CORE ATTRIBUTE 2: ACCOUNTABILITY—"Take responsibility for making sure we receive the best possible health care."		
Standard 2.A Performance & Clinical Quality		
2.A.0 PCPCH tracks one quality metric from the core or menu set of PCPCH Quality Measures.	Yes	0
2.A.2 PCPCH tracks and reports to the OHA two measures from the core set and one measure from the menu set of PCPCH Quality Measures.		10

2.A.3 PCPCH tracks, reports to the OHA and meets benchmarks on two measures from the core set and one measure from the menu set of PCPCH Quality Measures. (D) 15

Standard 2.B Public Reporting

2.B.1 PCPCH participates in a public reporting program for performance indicators. 5

2.B.2 Data collected for public reporting programs are shared within the PCPCH (with providers and staff) for improvement purposes. 10

Standard 2.C Patient and Family Involvement in Quality Improvement

2.C.1 PCPCH involves patients, caregivers, and patient-defined families as advisors on at least one quality or safety initiative per year. 5

2.C.2 PCPCH has established a formal mechanism to integrate patient, caregiver, and patient-defined family advisors as key members of quality, safety, program development and/or educational improvement activities. 10

2.C.3 Patient, caregiver, and patient-defined family advisors are integrated into the PCPCH and function in peer support or in training roles. 15

Standard 2.D Quality Improvement

2.D.1 PCPCH uses performance data to identify opportunities for improvement and acts to improve clinical quality, efficiency and patient experience. 5

2.D.2 PCPCH utilizes improvement teams that are multidisciplinary and meet regularly to review timely, actionable, team-level data related to their chosen improvement project and documents their progress. 10

2.D.3 PCPCH has a documented clinic-wide improvement strategy with performance goals derived from community, patient, family, caregiver, and other team feedback, publicly reported measures, and areas for clinical and operational improvement identified by the practice. The strategy includes a quality improvement methodology, multiple improvement related projects, and feedback loops for spread of best practice. 15

Standard 2.E Ambulatory Sensitive Utilization

2.E.1 PCPCH tracks selected utilization measures most relevant to their overall or an at-risk patient population. 5

2.E.2 PCPCH tracks selected utilization measures, and sets goals and works to optimize utilization through: monitoring selected measures on a regular basis, and enacting evidence-based strategies to promote appropriate utilization. 10

2.E.3 PCPCH tracks selected utilization measures, and shows improvement or meets a benchmark on selected utilization measures. 15

CORE ATTRIBUTE 3: COMPREHENSIVE WHOLE-PERSON CARE - "Provide or help us get the health care, information, and services we need."

Standard 3.A Preventive Services

3.A.1 PCPCH routinely offers or coordinates recommended age and gender appropriate preventive services based on best available evidence. 5

3.A.2 PCPCH routinely offers or coordinates recommended age and gender appropriate preventive services, and has an improvement strategy in effect to address gaps in preventive services offerings as appropriate for the PCPCH patient population. 10

3.A.3 PCPCH routinely offers or coordinates 90% of all recommended age and gender appropriate preventive services. 15

Standard 3.B Medical Services

3.B.0 PCPCH reports that it routinely offers all of the following categories of services: Acute care for minor illnesses and injuries; Ongoing management of chronic diseases including coordination of care; Office-based procedures and diagnostic tests; Patient education and self-management support.	Yes	0
Standard 3.C Mental Health, Substance Abuse, & Developmental Services		
3.C.0 PCPCH has a screening strategy for mental health, substance use, or developmental conditions and documents on-site and local referral resources.	Yes	0
3.C.2 PCPCH has a cooperative referral process with specialty mental health, substance abuse, or developmental providers including a mechanism for co-management as needed.		10
3.C.3 PCPCH is co-located either actually or virtually with specialty mental health, substance abuse, or developmental providers.		15
Standard 3.D Comprehensive Health Assessment & Intervention		
3.D.1 PCPCH provides comprehensive health assessment and interventions, when appropriate, for at least three health risk or developmental promotion behaviors.		5
Standard 3.E Preventive Services Reminders		
3.E.1 PCPCH uses patient information, clinical data, and evidence-based guidelines to generate lists of patients who need reminders and to proactively advise patients/families/caregivers and clinicians of needed services.		5
3.E.2 PCPCH tracks the number of unique patients who were sent appropriate reminders.		10
3.E.3 Using a method that satisfies either Stage 1 or Stage 2 meaningful use measures, the PCPCH sends reminders to patients for preventative/follow-up care.		15
CORE ATTRIBUTE 4: CONTINUITY - "Be our partner over time in caring for us."		
Standard 4.A Personal Clinician Assigned		
4.A.0 PCPCH reports the percentage of active patients assigned to a personal clinician or team. (D)	Yes	0
4.A.3 PCPCH meets a benchmark in the percentage of active patients assigned to a personal clinician or team. (D)		15
Standard 4.B Personal Clinician Continuity		
4.B.0 PCPCH reports the percentage of patient visits with assigned clinician or team. (D)	Yes	0
4.B.2 PCPCH tracks and improves the percentage of patient visits with assigned clinician or team. (D)		10
4.B.3 PCPCH meets a benchmark in the percentage of patient visits with assigned clinician or team. (D)		15
Standard 4.C Organization of Clinical Information		
4.C.0 PCPCH maintains a health record for each patient that contains at least the following elements: problem list, medication list, allergies, basic demographic information, preferred language, body mass index (BMI)/BMI percentile/growth chart as appropriate, and immunization record; and updates this record as needed at each visit.	Yes	0
Standard 4.D Clinical Information Exchange		
4.D.3 PCPCH shares clinical information electronically in real time with other providers and care entities (electronic health information exchange).		15
Standard 4.E Specialized Care Setting Transitions		
4.E.0 PCPCH has a written agreement with its usual hospital providers or directly provides routine hospital care.	Yes	0
Standard 4.F Planning for Continuity		

4.F.1 PCPCH demonstrates a mechanism to reassign administrative requests, prescription refills, and clinical questions when a provider is not available.		5
Standard 4.G Medication Reconciliation		
4.G.1 Upon receipt of a patient from another setting of care or provider of care (transitions of care) the PCPCH performs medication reconciliation.		5
4.G.2 PCPCH tracks the percentage of patients whose medication regimen is reconciled.		10
4.G.3 Using a method that satisfies either Stage 1 or Stage 2 meaningful use measures, the PCPCH performs medication reconciliation for patients in transition of care.		15
CORE ATTRIBUTE 5: COORDINATION AND INTEGRATION - "Help us navigate the health care system to get the care we need in a safe and timely way."		
Standard 5.A Population Data Management		
5.A.1a PCPCH demonstrates the ability to identify, aggregate, and display up-to-date data regarding its patient population.		5
5.A.1b PCPCH demonstrates the ability to identify, track and proactively manage the care needs of a sub-population of its patients using up-to-date information.		5
Standard 5.B Electronic Health Record		
5.B.3 PCPCH has a certified EHR and the PCPCH practitioners must meet the standards to be "meaningful users" of certified EHR technology established by the Centers for Medicare and Medicaid Services.		15
Standard 5.C Complex Care Coordination		
5.C.1 PCPCH assigns individual responsibility for care coordination and tells each patient or family the name of the team member responsible for coordinating his or her care.		5
5.C.2 PCPCH describes and demonstrates its process for identifying and coordinating the care of patients with complex care needs.		10
5.C.3 PCPCH develops an individualized written care plan for patients and families with complex medical or social concerns. This care plan should include at least the following: self management goals; goals of preventive and chronic illness care; and action plan for exacerbations of chronic illness.		15
Standard 5.D Test & Result Tracking		
5.D.1 PCPCH tracks tests ordered by its clinicians and ensures timely and confidential notification or availability of results to patients and families with interpretation, as well as to ordering clinicians.		5
Standard 5.E Referral & Specialty Care Coordination		
5.E.1 PCPCH tracks referrals to consulting specialty providers ordered by its clinicians, including referral status and whether consultation results have been communicated to patients and/or caregivers and clinicians.		5
5.E.2 PCPCH demonstrates active involvement and coordination of care when its patients receive care in specialized settings (hospital, SNF, long term care facility).		10
5.E.3 PCPCH tracks referrals and cooperates with community service providers outside the PCPCH, such as dental, educational, social service, foster care, public health, non-traditional health workers and pharmacy services.		15
Standard 5.F End of Life Planning		
5.F.0 PCPCH has a process to offer or coordinate hospice and palliative care and counseling for patients and families who may benefit from these services.	Yes	0

5.F.1 PCPCH has a process to engage patients in end-of-life planning conversations and completes advance directive and other forms such as POLST that reflect patients' wishes for end-of-life care; forms are submitted to available registries (unless patients' opt out).		5
CORE ATTRIBUTE 6: PERSON AND FAMILY CENTERED CARE - "Recognize that we are the most important part of the care team - and that we are ultimately responsible for our overall health and wellness."		
Standard 6.A Language / Cultural Interpretation		
6.A.0 PCPCH offers and/or uses either providers who speak a patient and family's language at time of service in-person or telephonic trained interpreters to communicate with patients and families in their language of choice.	Yes	0
6.A.1 PCPCH translates written patient materials into all languages spoken by more than 30 households or 5% of the practice's patient population.		5
Standard 6.B Education & Self-Management Support		
6.B.1 PCPCH has a process for identifying patient-specific educational resources and providing those resources to patients when appropriate.		5
6.B.2 More than 10% of unique patients are provided patient-specific education resources.		10
6.B.3 More than 10% of unique patients are provided patient-specific education resources and self-management services.		15
Standard 6.C Experience of Care		
6.C.1 PCPCH surveys a sample of its patients and families at least annually on their experience of care. The patient survey must include questions on access to care, provider or health team communication, coordination of care, and staff helpfulness. The recommended patient experience of care survey is one of the CAHPS survey tools.		5
6.C.2 PCPCH surveys a sample of its population at least annually on their experience of care using one of the CAHPS survey tools. The patient survey must at least include questions on provider communication, coordination of care, and practice staff helpfulness.		10
6.C.3 PCPCH surveys a sample of its population at least annually on their experience of care using one of the CAHPS survey tools and meets benchmarks on the majority of the domains regarding provider communication, coordination of care, and practice staff helpfulness.		15
Standard 6.D Communication of Rights, Roles, and Responsibilities		
6.D.1 PCPCH has a written document or other educational materials that outlines PCPCH and patient/family rights, roles, and responsibilities and has a system to ensure that each patient or family receives this information at the onset of the care relationship.		5

SOURCE: Oregon Health Authority, 2014.

State of Minnesota Health Care Homes Program

Eligibility

Clinics and providers are eligible to apply for the HCH program as long as they "work as a part of a team and take responsibility for the patient's care providing the full range of services including preventive, acute and chronic care (Minnesota, 2008). Sites or providers that achieve recognition are eligible for a per member per month care coordination payment (Minnesota, 2016a).

Method for Application

Sites begin the process of applying for recognition with a request for access to the Minnesota Department of Health (MDH) HCH portal. Once that is processed, MDH emails the access permissions to the site. The site must then submit a formal notification of intent to apply for HCH certification, which can be done by through the online system. All clinics within a system must then submit their own online application and the ten required documents for initial certification through the portal. Within two weeks, the MDH will contact the site to schedule a site visit. The MDH uses the site visit to ensure that the site is implementing all documented processes. MDH notifies the site of the decision on recognition within 90 days of the site visit. Sites may also request a variance for specific standards if they have good cause or they may appeal a denial (Minnesota, 2016b).

Standards for Recognition

Applicants that meet all requirements for certification are given a seal of certification to use in all marketing materials (Minnesota, 2016c).

Exhibit A1.5. Standards for Minnesota HCH Program

Access & Communication: increased access; culturally-appropriate care
Care Coordination: coordinate care for patients and their families across providers and settings; promote connections to community resources and transitions of care
Care Plan: patient- and provider-developed health care goals; wellness promotion
Use of Registries: population management; pre-visit planning
Quality: evidence-based practices; and quality improvement plan and performance measurement with benchmarking

SOURCE: AARP, undated-a.

A2. Qualitative Methods

This appendix first provides an overview of the qualitative methods used in the evaluation and then provides more detail on the methods for the site leader interviews, primary care association (PCA) leader interviews, site visits, and cross-case analyses.

Qualitative Methods Overview

To better understand the process and implementation issues involved in PCMH transformation, NCQA recognition, and delivery of technical assistance (TA), the evaluation has utilized several qualitative methods tailored to the types of stakeholders and levels of the Advanced Primary Care Practice (APCP) demonstration. These methods include interviews, focus groups, and site visits.

Interviews

Semistructured interviews were used to collect qualitative perspectives from site leaders (from both demonstration and comparison sites) and from leaders of state PCAs involved in delivering TA directly to sites. The interviews lasted approximately one hour each and were conducted by telephone, except for those conducted in person during a subset of site visits (see below).

Focus Groups

Focus groups were used to collect qualitative perspectives from practice coaches employed by state PCAs to deliver direct TA to demonstration sites. They were also used to understand perspectives of Medicare beneficiaries and caregivers receiving care from demonstration sites. The PCA practice coach focus groups were conducted by teleconference call, supplemented with web-meeting slide prompts, and included four to ten participants, depending on the size of the PCA cluster region. All beneficiary and caregiver focus groups were conducted in person at their respective FQHC demonstration sites and designed to include eight to 12 participants per focus group. Both the PCA practice coach and beneficiary/caregiver focus groups were designed to last approximately 90 minutes.

Site Visits

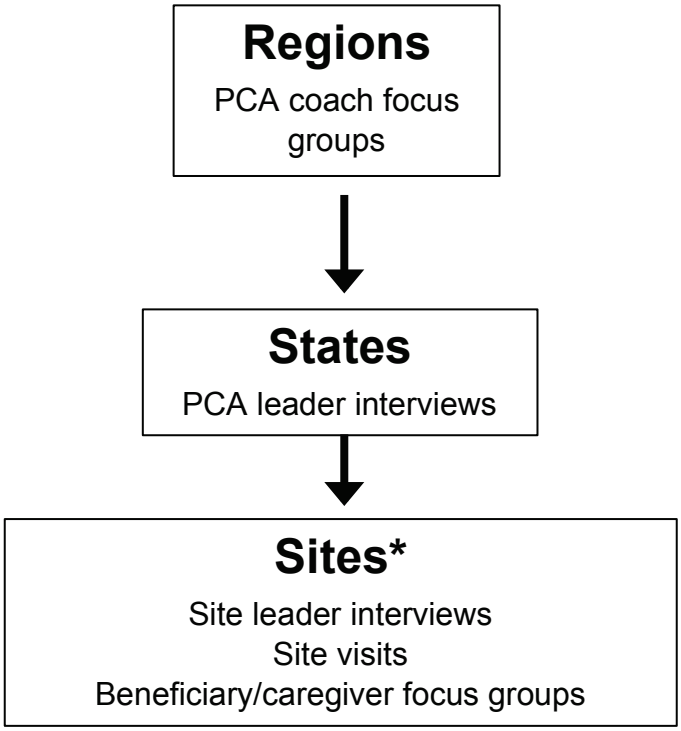
We also conducted full-day site visits at five demonstration sites that include in-person interviews, walk-throughs and other observations of clinic operations and process, and PCMH-

related documents that sites were willing to share (e.g., clinic brochures, patient-provider agreements).

Nested Sampling Design

Per our initial sampling plan described in the Evaluation Design Report (Kahn, Friedberg, et al., undated), the qualitative components of the evaluation utilized a nested sampling design, starting at the regional level and identifying a set of six states—one from each region—as an integrated sample frame for the PCA interviews, focus groups, and other data-collection activities (Exhibit A2.1). At the site level, we randomly selected 20 sites from the participating FQHC sample and ten from the comparison FQHC sample using a trifold stratification method, based on the following three stratification criteria: *state* (the six states—one from each of the six PCA clusters—identified in the integrated sample frame); *Readiness Assessment Survey (RAS) score trajectory* (three categories: Low Baseline–Low Year One, High Baseline–High Year One, and Change ≥ 15 RAS scores between baseline and Year One); and *urbanicity* (two categories: rural and urban, based on U.S. Census indicators for geocoded addresses of each FQHC). Low RAS scores were defined as those within the bottom tertile for all demonstration sites, and high RAS scores as those within the top tertile.

Exhibit A2.1. Qualitative Nested Sampling Design



SOURCE: RAND sampling design for qualitative analysis.
* Qualitative site data collection included a focus on the grantee level, since the main informants of PCMH efforts for many sites were at this level rather than the individual clinic locations initially selected.

From Site- to Grantee-Level Sampling

After several initial demonstration site leader interviews at baseline, we learned that, for the majority of sites, the individuals primarily responsible for PCMH change efforts and participation in the FQHC APCP Demonstration were located at the FQHC *grantee level*, rather than being limited to the single site selected by RAND for the baseline interview. Therefore, we moved from a site-level sampling strategy to an FQHC grantee–level one. We examined the characteristics of the selected demonstration sites and determined that the original sample of sites provided a diverse sample along three grantee-level characteristics that RAND considered to be most important: (1) number of service delivery sites operated by the grantee, (2) percentage of sites located in rural areas, and (3) percentage of sites participating in the Health Resources and Services Administration (HRSA) PCMH Initiative. Sampled demonstration grantees that declined to participate or failed to respond to our invitations for a baseline interview (n=11) were replaced by other demonstration grantees whose profile matched the original according to these three characteristics. One sampled state did not include any demonstration interviews due to all sites declining a baseline interview. Only one demonstration site in the baseline interview sample

declined a follow-up interview, and so was replaced with a demonstration grantee matching the original on the three characteristics described above.

Similarly, ten comparison grantees were selected for baseline site interviews, randomly selected from the quantitative site comparison sample using the same three stratification criteria to most closely match ten of the 20 demonstration FQHC grantee organizations. All ten comparison grantees participating in the baseline site interviews also participated in the site interviews at follow-up.

Recruitment

For each site selected for interviews, RAND contacted the designated FQHC APCP Demonstration contact (or for comparison FQHCs, the main contact listed by HRSA) to identify the most appropriate leader familiar with PCMH change and/or practice transformation to invite for an interview. The main interviewee identified by this process frequently invited one or two other individuals within their organization also involved in PCMH change efforts. Interview respondents from demonstration FQHCs did not receive any payment for participating in the interview. Comparison FQHCs received an incentive payment of $25 per person for up to two persons per interview.

For each of the six states in the integrated sample frame, RAND and the Centers for Medicare and Medicaid Services (CMS) worked with the lead TA contractor, American Institutes for Research (AIR), to identify the most appropriate state PCA leaders. CMS sent a letter by email to each selected state PCA leader encouraging the association to participate in an interview with RAND. RAND then invited each identified state PCA leader individually to participate in an interview. The state PCA leaders were also allowed to include other PCA staff knowledgeable of their PCMH TA in the interview.

Exhibit A2.2 details the selection criteria and sample size for the qualitative methods used for each stakeholder group. Qualitative data were collected at two time points (early and late) for all stakeholder and method combinations, except for the site visits and the beneficiary/caregiver focus groups which are only being conducted at one (late) time point.

Exhibit A2.2. Qualitative Sample Selection Criteria and Sizes

Stakeholders	Method	Selection Criteria	Sample Size
Regions			
PCA practice coaches	Focus groups	One group per region, including providers of direct TA	n=6 groups[a]
States			
PCA leaders	Interviews	One state per region, including three cluster-lead PCAs and three other PCAs	n=6 PCAs[a]
Sites			
Demo site leaders	Interviews	State[b] RAS score trajectory (high-high, low-low, improver), and urbanicity	n=20 sites[a]
Comparison site leaders	Interviews	Matched half selected demo sites on selection criteria	n=10 sites[a]
Demo site leaders and staff	Site visits	RAS score trajectory (Two improvers, two high-high, one low-low); variation by state, size, urbanicity	n=5 sites[c]
Beneficiaries/ caregivers	Focus groups	Five sites, three per site, including two beneficiary and one caregiver focus groups	n=15 groups[c]

SOURCE: RAND sampling design for qualitative analyses.

[a] Two time points, early (Year Two) and late (Year Three).

[b] Sampled from the six selected states; however, no demo sites were recruited from one state.

[c] One late (Year Three) time point.

Exhibit A2.3 provides details on the timing of each data collection.

Exhibit A2.3. Timing of Qualitative Date Collection

Type of Qualitative Data Collection	Timing	Number and Type of Respondents
Early site leader interviews	May–September 2013	20 leaders of demonstration sites; ten leaders of comparison sites
Late site leader interviews	October–December 2014	20 leaders of demonstration sites; ten leaders of comparison sites
Early PCA interviews	August–October 2013	Six PCA leaders (one in each of the six clusters)
Late PCA interviews	September–November 2014	Six PCA leaders (one in each of the six clusters)
Early PCA focus groups	September–November 2013	Six focus groups (one in each of the six clusters)
Late PCA focus groups	October–December 2014	Six focus groups (one in each of the six clusters)
Beneficiary focus groups	November–December 2014	15 focus groups (three each at five demonstration sites)

The second annual report (Kahn and Timbie, 2015b) presented results on the qualitative data collection and analysis completed at the time that report was submitted, namely the thematic

analysis of the early site leader and early PCA leader interviews. These results are integrated into the analyses of the later site leader interviews, PCA leader interviews, site visits, and other qualitative analyses presented in this final report.

FQHC Site Leader Interviews

As planned in RAND's Evaluation Design Report (Kahn, Friedberg, et al., undated), we conducted a set of baseline site interviews with leaders responsible for PCMH implementation and/or practice transformation in 20 demonstration FQHCs and ten comparison FQHCs, between May and September 2013. The purpose of the interviews with demonstration sites was to understand the context, intervention, and implementation process of participating FQHCs with PCMH transformation and recognition. The purpose of the interviews with the comparison sites was to help identify potential unique drivers of change in intervention sites and to improve generalizability of demonstration site findings to the wider population of FQHCs beyond the APCP demonstration.

Topics for the baseline site interviews included an overview of clinic context and characteristics, such as engagement with other initiatives (organized by CMS or other bodies); perspectives on the PCMH model, recognition, and effects on patient and family experiences of care; practice change and PCMH implementation issues; and (for demonstration sites) experiences with the demonstration, including use and perceived utility of the TA, enhanced PCMH payments and quarterly feedback reports, and the effect of the FQHC APCP demonstration on clinic operations.

Thematic Analysis

We used a variation of content analysis to develop a coding scheme for performing a qualitative description of the themes discussed by the FQHC leaders. In this approach, we first developed an initial codebook based on the items in the interview protocol. Three evaluation team members, led by Dr. Peter Mendel, independently test-coded the same two transcripts (conducted by separate interviewers) for all major themes in the codebook using the NVivo qualitative software package. Interrater reliability across all codes ranged from 72-percent to 89-percent agreement. Discrepancies were resolved by consensus in discussion among the three coders, which also resulted in additions or modifications to 13 codes. The interviews were then coded from scratch in a two-stage process: first, coding text to all major themes in the revised codebook; then, coding these categories for subthemes (e.g., identifying types of challenges and facilitators to PCMH implementation). Team members worked in pairs on the analysis, identifying subthemes and writing summaries of the qualitative findings.

We analyzed themes from the batch of early site leader interviews. Those marked with an asterisk (*) include analysis of comparison site interviews, as well for demonstration site

interviews. These comparisons allow the analyses to identify similarities and differences between demonstration and comparison FQHCs. The full list of themes includes:

- reasons for participating in the FQHC APCP demonstration
- sites' experiences obtaining or planning to obtain PCMH recognition with specific discussion of PCMH component challenges
- changes in clinic structure or process expected to affect Medicare beneficiaries or other types of clients
- challenges with PCMH implementation, including specific discussion of challenges of NCQA recognition*
- facilitators of PCMH implementation, including specific discussion of facilitators of NCQA recognition*
- expected visibility of PCMH changes to patients and caregivers
- FQHC perspectives on the five intervention components offered by the CMS demonstration*
- change management strategies and ongoing changes reported by sites for PCMH implementation
- site feedback and suggestions for PCMH implementation.

Three of these themes were newly analyzed since the first annual report, including facilitators of NCQA recognition as a component of the broader discussion of facilitators of PCMH implementation, changes in clinic structure and process reported by sites as part of their PCMH implementation, and site feedback and suggestions for the demonstration. Results from the site interviews across these themes have been incorporated throughout the second annual report to respond closely to the current set of evaluation research questions.

Qualitative Inference and Interpretation

The qualitative sampling was designed to maximize variation of experience according to our sampling criteria (geographic region, urbanicity, and RAS score) and thus the reported themes provide a range of possible alternatives, rather than the most common or representative themes within the FQHC APCP Demonstration or our sample of comparison FQHCs. We present all themes identified by interview respondents for a particular topic, organized by major themes, with discussion of subthemes within those major categories.

PCA Leader Interviews

As described in RAND's Evaluation Design Report (Kahn, Friedberg, et al., undated), we also conducted a set of baseline interviews with leaders of PCAs in each of the six states selected for the qualitative TA evaluation sample, which included three PCAs serving as cluster regional leads and three PCAs that are not. The purpose of these semistructured qualitative interviews

with state PCA leaders was to learn how TA is being planned and implemented for demonstration sites. The subset of interviews with PCA cluster leads was intended to inform us about TA at both the regional and state levels. The key informants for these interviews were PCA executives and other leaders responsible for managing programs delivering TA to demonstration sites, who provided perspectives on the organization of the demonstration-related TA within the state and supplemented perspectives from the PCA focus groups with practice facilitators and coaches who interact directly with demonstration sites.

Interview topics for the PCA leader interviews included

- types of support the PCA provides to demonstration sites
- how the PCA is organizing TA to demonstration sites
- types of staff who interact directly with demonstration sites (e.g., their own staff, other PCAs, subcontractors)
- the response of demonstration sites to the TA and any issues with site participation
- the kinds of support that seem more and less helpful to sites
- main challenges that sites are having with PCMH transformation and NCQA recognition
- how the types of TA provided and experiences of demonstration sites compare with other FQHCs the PCA is supporting
- plans the PCA has for TA to demonstration sites going forward.

Interviews with lead PCAs of regional clusters included questions on coordinating TA across PCAs within their region, and perspectives on the support that the cluster lead receives from CMS and the national demonstration partners. Interviews with the other three PCAs included questions on the kinds and usefulness of support they receive from their regional cluster lead and national demonstration partners.

Thematic Analysis

We used a variation of content analysis similar to the approach described for the analysis of the FQHC site interviews described above. We first developed an initial codebook based on the items in the interview protocol. A team of two coders, experienced with analyses of the site leader interviews and led by Dr. Mendel, analyzed the set of six PCA leader baseline interviews. As with the site interviews, the transcripts of the PCA leader interviews were coded in a two-stage process: first, coding text to all major themes in the codebook; then, coding these categories for subthemes if necessary, from which summaries of the qualitative findings were written.

Analyses include the following priority themes:

- differences in PCA support to demonstration versus nondemonstration sites
- barriers to providing TA to demonstration sites
- strategies for engaging sites with TA

- PCA suggestions for the demonstration moving forward.

Qualitative Inference and Interpretation

The qualitative sampling of state PCAs was designed to maximize variation of experience to our sampling criteria (geographic region, and leading a regional cluster of other state PCAs), and thus the reported themes represent a range rather than the most common or representative themes within the six PCAs we interviewed. We present all themes identified by interview respondents for a particular topic, organized by major themes with discussion of subthemes within those major categories. Given the small sample of state PCA leader interviews, we do not differentiate results on the above three topics based on state PCA characteristics.

Site Visits

As planned in RAND's Evaluation Design Report (Kahn, Friedberg, et al., undated), we conducted a set of five site visits during Year Three of the demonstration, chosen from within the sample of 20 demonstration clinics that participated in the baseline and follow-up intervention site-leader interviews. The purpose of the site visits was to enhance the qualitative analysis of contextual and implementation dynamics via onsite observations and other data collection, and to inform and help validate the design and interpretation of other qualitative and quantitative data in the evaluation. In particular, the site visits provided valuable opportunities to conduct interviews with a wider range of clinicians and staff in the clinic setting; gather data on aspects of clinic context, workflow, division and sharing of tasks, culture, and informal processes related to implementing PCMH and practice changes that are often difficult to assess remotely; and observe the interactions of contextual and implementation dynamics *in vivo*.

To ensure a range of site experience, we selected site visits by stratifying the demonstration interview sample according to RAS score trajectory (used similarly as in the initial site interview sampling) to include at least the following: two sites reflecting high implementation of the PCMH model (defined as in the highest tertile of RAS scores at both baseline and Year Two), two sites reflecting sizable increase in implementation of the PCMH model (defined as a change of ≥15 points in RAS scores between baseline and Year Two), and one site reflecting low implementation of the PCMH model (defined as in the lowest tertile of RAS scores at both baseline and Year Two). Among sites fitting these criteria, we also selected sites to reflect, as much as possible, a range of other key clinic attributes across the site visit sample, including *size* of clinical staff, *urbanicity* (rural/urban), and *geographic location* (state). The final site visit sample reflected the intended variation in RAS score trajectory, size, and geographic location; however, it included only one urban site, as all other urban sites in the qualitative sample fitting the initial RAS trajectory categories declined to participate in a site visit (although almost all participated in the telephone follow-up interviews).

Each site visit was conducted by an investigator and a research assistant from the RAND evaluation team, who spent one day onsite per clinic (in some cases split between two half-days). All site visits were conducted between July and November 2014. The site visits employed three data collection methods:

- **in-person, semistructured interviews** with the main site PCMH lead and other key clinic stakeholders in the PCMH effort, including at least two clinicians and two other staff (e.g., clinic leaders, quality improvement [QI] professionals, and/or front-office personnel)
- **nonparticipant observations**, including of day-to-day clinical workings, a simulated "walk-through" of typical care process, and (depending on schedule and site permission) staff meetings related to implementation of the PCMH model and NCQA certification
- **organizational documents and secondary data**, including internal documents that clinics voluntarily agreed to share regarding PCMH change initiatives, NCQA certification, and participation in the APCP demonstration; secondary data included quantitative descriptive indicators that the project collected on each site from CMS and other sources (e.g., HRSA).

The in-person site interviews were conducted with respondents identified by the main PCMH lead and other demonstration leaders and used the same interview questions included in the Year Three demonstration site leader interviews conducted by telephone. Topics included perspectives on the PCMH model and NCQA recognition; successful aspects of PCMH implementation and effects on clinic, staff, patients, and the patients' families; challenges to and critical factors of implementation; differentiation of effects of the APCP demonstration versus other change initiatives; sustainability of changes; and advice for other FQHCs and for CMS. As with the other Year Three interviews, the site visit interviews were audio recorded (with permission of the respondent) and transcribed for analysis.

To document the nonparticipant observations, the evaluation team used a standard observation note template, recording notes discreetly on site and/or afterward within 24 hours. Members of the site visit team conducted a joint debriefing to combine observations into a single set of notes within 72 hours. The site visit team was careful not to observe private interactions between patients and providers nor to collect any patient-identifiable information while on site.

Case Site Analysis

We used the results of the interviews and site visit analyses to develop a series of case studies describing five sites' pathways toward PCMH transformation. The approach used to develop these cases and the resulting case studies themselves can be found in Appendix A7.

Qualitative Cross-Case Analyses

This section provides further detail on methods employed for the cross-case analyses presented in Chapter Eight, including (1) coding definitions for indicators of PCMH practice readiness, cultural readiness, components, and structural change process used in the cross-case analyses; (2) detailed methods and results of the conventional cross-case analysis; and (3) technical specifications and output of the Qualitative Comparative Analysis (QCA) models.

We utilized two comparative case methods for the cross-case analysis. We first conducted a conventional cross-case analysis that relied on manual sorting and pattern finding (Yin, 2013; Eisenhardt, 1989) to explore combinations of factors in our conceptual model related to the outcome of attaining NCQA Level 3 recognition. We report a detailed account of that analysis in Appendix A9. This conventional cross-case analysis provided initial insight into the key factors related to attaining Level 3 recognition, how to operationalize indicators of those factors, and how they differ across the cases in our qualitative interview sample.

Building on the findings of the conventional cross-case analysis, we then further developed and refined our indicator set and utilized QCA methods (Ragin, 1987; Rihoux and Ragin, 2009) to more systematically identify groupings of factors (also referred to as *pathways* or *recipes*) associated with either attaining or not attaining Level 3 recognition by the end of the demonstration. These results are reported in Chapter Six, with supplementary details presented in this section of the appendix.

Coding Definitions for Indicators Used in Cross-Case Analyses

Both cross-case methods used a similar dataset of indicators based on the conceptual framework originally introduced in Chapter One, Exhibit 1.2. Using this framework—informed by the literature and our thematic interview and site visit summary analyses—we conceptualized organizational readiness for PCMH transformation as consisting of PCMH practice readiness, PCMH cultural readiness, and site operational characteristics. We defined a site's *PCMH practice readiness* as consisting of: (1) the level of key medical home practices before the beginning of the demonstration (for demonstration sites) and before the first interview (for comparison sites); and (2) whether the site had a fully functional EHR system prior to the demonstration period. *PCMH cultural readiness* was defined as a site's experience with quality improvement and assurance (QI-QA) initiatives, presence of PCMH champions or strong staff buy-in (Backer and Rogers, 1998), and the amount of leadership support for PCMH transformation. *Site operational characteristics*, including service, beneficiary, and geographic characteristics, were also included as key baseline characteristics.

Certain baseline site features, such as site size or geographic location, were more static than others, such as EHR functionality or leadership support, which changed for some sites over the course of the demonstration. However, factors in all three domains of site-level characteristics were expected to affect the *structural change process*. Domains within the structural change

process included the uptake of external PCMH supports (such as PCMH-related TA or financial assistance used from the APCP demonstration or other sources), change strategies employed (such as change agent capacity of the individual assigned to lead a site's PCMH effort, or formation of a stable, coherent change team), and challenges and facilitators that sites encountered. These processes in turn were posited to affect *PCMH recognition status*, the main indicator of PCMH transformation and structural outcome of interest in these analyses.[1]

Data Sources

The cross-case analyses drew on both qualitative and quantitative sources of site-level data collected in the evaluation. Site operational characteristics and PCMH recognition outcomes were obtained primarily from quantitative data collected by RAND from HRSA, NCQA, and other recognition bodies, as well as CMS, which also provided sites' applications to the APCP demonstration. PCMH practice readiness, cultural readiness, and structural change process indicators were primarily sourced from the qualitative data, including site leader interviews with the demonstration sites (n=20) and comparison sites (n=10) in the qualitative evaluation sample at baseline and follow-up.[2]

Information about sites' EHR and QI experience was supplemented by quantitative data from sites' applications to the demonstration, while qualitative data were used to supplement information on recognition adoption status for comparison sites and final recognition status of sites that left the demonstration. Summaries of the site visits, which were conducted at follow-up with a subset of the demonstration sites in the qualitative interview sample, were used to inform the conceptual model described earlier and to develop case illustrations of the cross-case findings.

Details on the coding scheme and criteria for qualitatively based variables are given below. In brief, we abstracted and coded statements related to the constructs in the model, assigning sites high, moderate, or low levels for each construct, including various indicators in the domains for PCMH practice readiness, PCMH cultural readiness, and structural change process.

As noted, we refined the indicator set for the latter QCA cross-case analysis based on the results of the initial conventional cross-case analysis. Specifically, the initial indicator for cultural readiness used in the conventional cross-case analysis—which summarized indicators of

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[1] As shown in Exhibit 8.3, PCMH recognition is not the only indicator of structural transformation (and may also be an imperfect indicator, given occasional unintended consequences of recognition on transformation—see Section 2.3). Other indicators of PCMH transformation may include measures of PCMH practice change, e.g., scores on the demonstration's biannual RAS or expert assessments, such as ratings of site medical home practices by TA providers.

[2] One demonstration site interviewed at the baseline time point declined the follow-up interview, and so was excluded from this analysis, given missing data particularly on the implementation process indicators. The replacement for this demonstration site for the follow-up interviews was included in this analysis, given that the follow-up interview covered baseline topics necessary for this analysis.

leadership support, staff buy-in or availability of "champions," and prior experience with large QI initiatives—was decomposed into separate indicators for each of these subconstructs. The indicators for leadership support and staff buy-in or availability of "champions" were adjusted for changes in these variables over the course of the demonstration. The prior QI experience indicator was combined with a variable for previous experience with NCQA PCMH recognition. In addition, the initial indicators for other constructs related to the structural change process (i.e., change strategies employed, implementation challenges and facilitators) were not consistently related to other factors or the outcome of PCMH recognition in the conventional cross-case analysis, and so were not included in final models of that analysis. However, we developed alternative operationalizations of these constructs that were included in the final QCA models.

Indicator Coding

Site Operational Characteristics

Site size (based on total number of grantee patients of providers), urban/rural status, and state or region were included in preliminary analyses, but were not consistently related to other factors or to the outcome of medical home recognition. Accordingly, these attributes are not reported in the summary of cross-case results presented in Chapter Six or Appendix A9. However, we do include information on grantee size and urban/rural status for cases in each of the "pathways" identified in the final QCA models, as well as in the case illustrations.

PCMH Practice Readiness: Predemonstration Medical Homeness

To summarize the level of medical homeness of sites prior to the demonstration, we first developed scores based on the qualitative data for key practices in each of the six NCQA domains ranging from 0 to 3, reflecting absence of a practice (0), or limited, basic, or advanced implementation of a practice (for 1, 2, and 3, respectively) for each site in the qualitative sample. Details on how these levels were assigned are shown in Exhibit A2.4. We then took the highest score in each domain and averaged them across the six domains for an overall assessment of the level of medical homeness of a particular site.

For example, to determine a site's score for Domain One (Enhance Access and Continuity), we separately evaluated and scored text related to open access, empanelment, and care teams. We used the maximum of these scores as a rating for Domain One. We chose to use the maximum rating of components within a domain to give credit to sites that were excelling in one component, because many sites described focusing on one component before moving on to others. Applying this method to the components of each domain (for domains with more than one component), we then averaged domain-specific values to create a predemonstration medical

homeness score that is based solely on the qualitative data.[3] That is, this measure of predemonstration practices used in the qualitative cross-case analysis is not derived from the RAS scores, but rather from the qualitative data. We rank-ordered the sites and divided them into three categories based on this scale: *advanced* (predemonstration medical homeness score of >1); *basic* (>0.5 to 1, suggesting few PCMH practices in place prior to the demonstration); and *low* (0.5 or less, suggesting very few or no PCMH practices in place prior to the demonstration). The qualitative data used for this coding included the baseline and follow-up site interviews, as well as additional data from the site visits when possible.

PCMH Practice Readiness: EHR Functionality

We assessed the availability of a fully functional EHR at the start of the demonstration through information from site surveys and baseline interviews. Sites were coded at three levels of EHR functionality based on the timing of their EHR implementation: *had EHR prior to the demonstration period*; *implemented EHR concurrent with the start of the demonstration period*; *did not have fully functional EHR at the baseline interview.*

PCMH Cultural Readiness

For the initial conventional cross-case analyses, the level of PCMH cultural readiness was assessed as low, medium, or high, depending on the number and intensity of three components: leadership support for the PCMH effort, staff buy-in or availability of "champions" for PCMH, and prior experience with large QI–QA initiatives. Leadership support and staff buy-in were abstracted from baseline and follow-up interviews. Prior QI–QA experience was assessed based on baseline and follow-up interviews and site surveys.

For the QCA analysis, this initial indicator for PCMH cultural readiness was decomposed into separate indicators of each of these subconstructs. In addition, the prior QI experience indicator was also combined with a variable for previous experience with NCQA PCMH recognition.

Structural Change Process

We planned to measure the PCMH implementation process through sites' reported use of external PCMH support (i.e., sources of PCMH-related technical and financial assistance), the change strategies used to manage the PCMH change and recognition process, and the challenges and facilitators encountered during the PCMH change process. Use of external PCMH supports

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[3] Scores were created for available data only; missing information did not negatively affect a site's medical homeness average. Of the 20 demonstration sites, eight had complete data (i.e., at least one dimension of each domain described in the qualitative data), eight sites were missing data on one NCQA domain, and four sites were missing data on two NCQA domains. Of the ten comparison sites, none had complete data (i.e., at least one dimension for each NCQA domain), three sites were missing data for one domain, four were missing data for two or three NCQA domains, and three were missing data for four NCQA domains.

was assessed based on baseline and follow-up interviews; we abstracted and summed the sources of technical and financial assistance for PCMH change and/or recognition (whether from the demonstration or other sources). PCMH support utilization scores ranged from three to ten in demonstration sites and zero to two in comparison sites.

An initial indicator for change strategy was abstracted from the qualitative data based on how the change team was structured and staffed, but was not consistently related to other factors or to the outcome of medical home recognition. Therefore, it was not reported in the summary of results of the final conventional cross-case analysis. For the QCA models, however, we developed two specific indicators of the change process—change agent capacity and change team formation.

The variable for change agent capacity indicated the degree of "capacity" for managing practice change exhibited by the individual leading a site's PCMH effort. This indicator incorporated three dimensions coded from the qualitative site interviews: change credibility (including the individual's level in the organization, clinical background or relationships, and amount of time in the organization/position); change experience (including the individual's QI experience, broader change management experience, and specific PCMH experience); and amount of time and degree of priority the individual could dedicate to the PCMH effort. The indicator also took into account changes over time in who led a site's PCMH effort, and was coded high if the individual(s) leading the PCMH effort were strong in two or more dimensions for at least half of the demonstration period; moderate if strong in only one or moderate in all dimensions for at least half the demonstration; and low otherwise. A number of sites realized during the demonstration that individual assigned to lead the PCMH effort did not have the capacity required and assigned a new PCMH lead. Other sites that had a senior, experienced PCMH leader realized that PCMH effort was becoming more intense than initially expected and hired a dedicated support person to assist the PCMH lead. Change agent capacity was dichotomized as low capacity versus moderate or high capacity.

The variable for change team formation indicated the degree to which a site had a stable and cohesive PCMH implementation team. For example, some sites described effective and engaged teams that functioned well throughout the demonstration period. Other sites, in contrast, experienced turnover and/or reorganized of the change team during the demonstration, in response to perceptions that the existing model was not effective. Sources of difficult or unstable or noncohesive change teams included turnover in team members with poor knowledge transfer, competing staff priorities, and inclusion of the wrong number or types of people (according to the respondent's own assessment). Based on site leaders' descriptions of change team formation at baseline and change team challenges reported at follow up, we coded sites into three levels: implementation teams that were stable and cohesive throughout the demonstration; those that changed over time in an effort to improve effectiveness; and those that remained unstable or lacked cohesion throughout the demonstration. Cases exhibiting the first two levels appeared more similar than the last, so the indicator was dichotomized accordingly.

Challenges and facilitators experienced with PCMH implementation were systematically probed in the follow-up interviews. We derived indicators from these interview data for the total number, as well as different types, of challenges and facilitators reported by site. In the initial conventional cross-case analyses, no discernable relationships between these indicators and outcomes appeared to emerge. For the QCA analysis, we conducted separate models focusing on challenges associated with attaining versus not attaining recognition.

Exhibit A2.4. Coding Definitions for Indicators Used in Cross-Case Analyses

Domain or Construct (Response Choice)	Description
PCMH Practice Readiness	
1) Level of medical home practices in place prior to demonstration period, by National Committee for Quality Assurance domain	
A. Enhance access and continuity	
i. Open access/same day appointments *(Yes, No)*	Site had structure for patients to get same-day appointments with their care team
ii. Empanelment *(Yes, No)*	Patients were empaneled to a provider and care team who the patient saw for most visits
iii. Care and other teams *(No, Basic, Advanced)*	Sites used a team-based approach to care that included other clinical and nonclinical staff, in addition to the provider, to maximize services and coordination for the patient
B. Identify and manage patient populations *(No, Limited, Advanced)*	Through records review or registries, site tracks selected patient populations and does active outreach to encourage appropriate care
C. Plan and manage care	
i. Previsit planning *(Yes, No)*	Care teams prepare for patient visits by reviewing charts in advance of visit to identify and obtain needed test results, referral follow-up, etc.
ii. Care plan development *(No, Limited, Advanced)*	Patients are consulted or informed of care plans, and plans are documented in the medical record
D. Provide self-care support and community resources *(No, Limited, Advanced)*	Site has procedures around and staff tasked with patient education and community resource linking
E. Track and coordinate care	
i. Specialist tracking and coordination *(No, Limited, Advanced)*	Site has a systematic process for tracking and following up on patients' referrals to specialists, including obtaining specialist clinic notes to include in the patient record
ii. Hospital tracking and coordination *(No, Limited, Advanced)*	Site has a systematic process for tracking patients as they are admitted to and leave inpatient care
F. Measure and improve performance	
i. Measuring/improving performance *(No, Basic, Advanced)*	Site actively monitors patient care and other metrics and uses this information to improve site performance
ii. Consistent documenting of care *(Yes, No)*	Documentation of care in the medical record is comprehensive and consistent across patients and providers

Domain or Construct (Response Choice)	Description
2) Electronic health record (EHR) functionality *(Prior to demo, Early in demo, Implemented concurrently with demo, Not available at first interview)*	When fully functional EHR was available or implemented relative to demonstration period
PCMH Cultural Readiness	
1) QI-QA experience [a] *(None, Previous, More Previous)*	Site's involvement with external QI-QA initiatives, such as care collaboratives, learning communities, grants to increase cancer screening, etc.
2) NCQA experience [a] *(None, Previous NCQA recognition)*	Site's attainment of previous PCMH recognition from NCQA (i.e., attainment of NCQA's recognition to the 2008 standards (any level), or previous attainment of Level 1 or 2 to NCQA's 2011 PCMH standards)
3) QI-QA/NCQA experience [b] *(Low QI experience without prior NCQA recognition, High QI experience and/or prior NCQA recognition)*	Indicator combining QI-QA and NCQA experience, denoting sites that had high QI experience and/or prior NCQA recognition
4) Staff buy-in and champions *(None, Some support, High levels of support)*	Climate of staff support for medical home transformation, such as staff buy-in and the presence of staff "champions"
5) Leadership support *(Lacking, Moderate, Strong)*	Interview respondents' reports of leadership support of medical home transformation efforts, including providing resources, endorsing efforts, and monitoring progress
Structural Change Process	
1) Utilization of PCMH supports *(Low, High)*	Interview respondents' reports of sources of external technical and financial assistance used to support the PCMH transformation and recognition processes
2) Change agent capacity [b] *(Low, Moderate, High)*	Capacity of the individual leading a site's PCMH effort for managing practice change based on his or her change credibility, change experience, and dedicated time/priority for PCMH
3) Change team formation [b] *(Low throughout demo, High throughout or improved substantially over time)*	Degree to which a site had a stable and cohesive PCMH implementation team
4) General and specific barriers to transformation [b] *(Yes, No)*	Reported by site leaders, for each of the General Change Management Challenges (See Section V.2) or Specific Practice Change Challenges (See Section VI.4)
5) General and specific facilitators of transformation [b] *(Yes, No)*	Reported by site leaders, for each of the General Change Management Facilitators (See Section V.2) or Specific Practice Change Facilitators (See Section VI.4)

SOURCE: RAND coding definitions for cross-case qualitative analyses.
[a] Used only in conventional cross-case analyses.
[b] Used only in QCA models.

Qualitative Comparative Analysis

QCA is a method of cross-case analysis that uses Boolean logic to systematically identify factors associated with case outcomes, such as attaining or not attaining PCMH recognition (Ragin, 1987; Rihoux and Ragin, 2009). In particular, we used QCA methods to identify specific

groupings of factors (also known as *pathways* or *recipes*) associated with recognition outcomes, necessary and/or sufficient conditions for particular outcomes, and separate pathways or recipes associated with attaining NCQA Level 3 recognition versus not attaining Level 3 recognition.

QCA Analytic Strategy

As indicated above, we developed separate models of outcomes for attaining NCQA Level 3 recognition and for not attaining Level 3 recognition. These models included only the 20 demonstration sites in the qualitative interview sample given the data requirements for the additional variables included the QCA analyses. We applied standard QCA algorithms, which require dichotomizing all indicators, using the R statistical software package (R Core Team, 2013).

As part of the QCA method, we performed a process of model refinement both to hone which variables to include in the analysis and to "calibrate" those variables (i.e., determine the proper categorization of values for an indicator). This process of model refinement included conducting separate models of variables in each domain (e.g., site operational characteristics, PCMH practice readiness, PCMH cultural readiness) to identify factors that were either most commonly associated or appeared to differentiate sites with respect to the recognition outcome. As described in Chapter Six, this led to combining or excluding certain variables for the final models that included indicators across all the conceptual domains. As a consequence of the model refinement, we also decided to conduct separate models of the challenges reported by sites, since it was difficult to meaningfully reduce that set of indicators.

Lastly, the initial QCA models that included indicators across all domains showed that the site characteristic variables (i.e., urban versus rural sites, and small versus medium/large sized grantee organizations) did not appear to change the types of pathways identified, but rather tended to be associated with different pathways. To make results more parsimonious, in Chapter Six we present models that do not include the site characteristic variables but note in the tables the distribution of site characteristics among the cases comprising each pathway.

QCA Model Output of Pathways Associated with Level 3 Recognition

Below we provide the output of the specific QCA models we conducted and how they correspond to the tables and summaries of results presented in Chapter Six.

Attaining Level 3 Recognition: QCA Model Output

Eight factors (or implicants) were included in the final QCA for attaining recognition:

- **EHRFUNCHIGH** (fully functional EHR at baseline=1; 0 otherwise)
- **MHLOW** (predemonstration "medical homeness" low =1; 0=basic or advanced)
- **EXPERIENCE** (NCQA and/or high QI-QA experience=1; 0=none or low experience)
- **LSHIPHIGH** (leadership support high=1; 0=low)

- **ANYSTAFF** (presence of high staff support and/or champion for PCMH=1; 0=none or low)
- **TAHIGH** (external PCMH support use high=1; 0=medium or low)
- **CAC_DICHOT** (change agent capacity low=1; 0=moderate or high)
- **CTFORMLOW** (change team formation low=1; 0=medium or high)

The outcome of the model was:

- **L3** (attainment of NCQA Level 3 recognition by the end of the demonstration; n=14 out of 20 cases in the demonstration interview sample)

The model produced one solution shown below. The all-caps version of a factor represents the value of its presence as coded "1" above. The all-lowercase versions represent the absence or alternate dichotomous value of that factor coded "0" above. The solution is interpreted similarly to algebra. Different combinations of factors related to the L3 outcome are separated by plus signs (+). The combinations of factor values comprising each solution are linked by asterisk (*) signs.

```
M1:
 EHRFUNCHIGH*mhlow*EXPERIENCE*LSHIPHIGH*tahigh*cac_dichot*ctformlow +
 mhlow*EXPERIENCE*LSHIPHIGH*anystaff*TAHIGH*cac_dichot*ctformlow +
 ehrfunchigh*MHLOW*experience*LSHIPHIGH*ANYSTAFF*TAHIGH*cac_dichot*ctformlow +
 EHRFUNCHIGH*mhlow*experience*lshiphigh*ANYSTAFF*TAHIGH*cac_dichot*CTFORMLOW +
 EHRFUNCHIGH*mhlow*EXPERIENCE*lshiphigh*ANYSTAFF*TAHIGH*cac_dichot*ctformlow +
 EHRFUNCHIGH*MHLOW*experience*LSHIPHIGH*anystaff*tahigh*cac_dichot*ctformlow <=> L3
```

Factor values that are common across pathways can be "factored out" to simplify the solution and show different sets of pathways that share particular characteristics, but differ on others. There were 82 such possible ways (or "factorizations") to simplify this final QCA model. We chose the following factorization that first pulled out those prime implicants shared by all sites that achieved L3 (considered necessary, if not sufficient, conditions) and then focused on predemonstration "medical homeness" and similar factors that could help separate pathways according to the "starting points" of sites in their PCMH journey.

```
F45:
 cac_dichot*
            (EHRFUNCHIGH*mhlow*EXPERIENCE*LSHIPHIGH*tahigh*ctformlow +
             mhlow*EXPERIENCE*LSHIPHIGH*anystaff*TAHIGH*ctformlow +
             ehrfunchigh*MHLOW*experience*LSHIPHIGH*ANYSTAFF*TAHIGH*ctformlow +
             EHRFUNCHIGH*mhlow*experience*lshiphigh*ANYSTAFF*TAHIGH*CTFORMLOW +
             EHRFUNCHIGH*mhlow*EXPERIENCE*lshiphigh*ANYSTAFF*TAHIGH*ctformlow +
             EHRFUNCHIGH*MHLOW*experience*LSHIPHIGH*anystaff*tahigh*ctformlow)
```

This factorization can also be expressed in a tree outline form to more clearly show the factor values on which the pathways diverge. In the example below, all pathways for the outcome of attaining Level 3 recognition shared having moderate-to-high change agent capacity of the individual leading a site's PCMH effort (*cac_dichot*). Then, pathways could be divided by those having medium-to-high "medical homeness" (mhlow) and those with low "medical homeness"

(MHLOW). The high medical homeness pathways could then be subdivided into two other pathways (i and ii), the latter of which could be divided into two others (1 and 2). The second (2) could be subdivided further (into a and b), but based on our thematic analyses, this level of bifurcation did not appear warranted, leaving us with three pathways among sites that started with medium-to-high medical homeness (i.e., 1/a/i, 1/a/ii/1, and 1/a/ii/2). For cases that started with low medical homeness (MHLOW), there were two identifiable pathways (1/b/i and 1/b/ii).

1. cac_dichot*
    a. mhlow*
        i. LSHIPHIGH*EXPERIENCE*anystaff*TAHIGH*ctformlow
        ii. EHRFUNCHIGH*
            1. LSHIPHIGH*EXPERIENCE*tahigh*ctformlow
            2. lshiphigh*ANYSTAFF*TAHIGH*
                a. experience*CTFORMLOW
                b. EXPERIENCE*ctformlow
    b. MHLOW*experience*LSHIPHIGH*ctformlow*
        i. EHRFUNCHIGH*anystaff*tahigh
        ii. ehrfunchigh*ANYSTAFF*TAHIGH

Not Attaining Level 3 Recognition: QCA Model Output

The QCA model for not attaining recognition included the same eight factors (or implicants) coded as above.

The outcome of the model was:

- **NOTL3** (not having attained NCQA Level 3 recognition by the end of the demonstration; n=6 out of 20 cases in the demonstration interview sample)

For this model, there was also only one solution:

```
M1:
 ehrfunchigh*mhlow*experience*lshiphigh*ANYSTAFF*TAHIGH*cac_dichot*ctformlow +
 ehrfunchigh*mhlow*experience*LSHIPHIGH*ANYSTAFF*tahigh*CAC_DICHOT*CTFORMLOW +
 ehrfunchigh*MHLOW*experience*lshiphigh*anystaff*tahigh*cac_dichot*CTFORMLOW +
 EHRFUNCHIGH*mhlow*experience*LSHIPHIGH*anystaff*tahigh*CAC_DICHOT*CTFORMLOW +
 EHRFUNCHIGH*mhlow*experience*LSHIPHIGH*ANYSTAFF*tahigh*CAC_DICHOT*ctformlow +
 EHRFUNCHIGH*MHLOW*experience*lshiphigh*anystaff*TAHIGH*cac_dichot*ctformlow <=> NOTL3
```

There were 83 possible factorizations of this final QCA model. Using similar criteria as for the first QCA model above, we chose the following factorization:

```
F31:
 experience*
            (ehrfunchigh*mhlow*lshiphigh*ANYSTAFF*TAHIGH*cac_dichot*ctformlow +
             ehrfunchigh*mhlow*LSHIPHIGH*ANYSTAFF*tahigh*CAC_DICHOT*CTFORMLOW +
             ehrfunchigh*MHLOW*lshiphigh*anystaff*tahigh*cac_dichot*CTFORMLOW +
             EHRFUNCHIGH*mhlow*LSHIPHIGH*anystaff*tahigh*CAC_DICHOT*CTFORMLOW +
             EHRFUNCHIGH*mhlow*LSHIPHIGH*ANYSTAFF*tahigh*CAC_DICHOT*ctformlow +
             EHRFUNCHIGH*MHLOW*lshiphigh*anystaff*TAHIGH*cac_dichot*ctformlow)
```

Expressing the factorization in a tree outline shows the four main pathways identified for the outcome of not attaining Level 3 recognition by the end of the demonstration (1/a/i, 1/a/ii, 1/b/i, and 1/b/ii). Note that based on our thematic analyses, we did not bifurcate the first two pathways further.

1. experience*
    a. mhlow*
        i. ehrfunchigh*ANYSTAFF*
            1. lshiphigh*TAHIGH*cac_dichot*ctformlow
            2. LSHIPHIGH*tahigh*CAC_DICHOT*CTFORMLOW
        ii. EHRFUNCHIGH*LSHIPHIGH* tahigh*CAC_DICHOT*
            1. anystaff*CTFORMLOW
            2. ANYSTAFF*ctformlow
    b. MHLOW*lshiphigh*anystaff*cac_dichot*
        i. EHRFUNCHIGH*TAHIGH*ctformlow
        ii. ehrfunchigh*tahigh*CTFORMLOW

Results for Urban vs Rural: QCA Model Output

Here, we provide the final factorizations in tree outline for the QCA models of attaining and not attaining Level 3 recognition by urban and rural demonstration sites in the qualitative interview sample. As described above, these models did not appear to change the types of pathways identified, but rather tended to be associated with different pathways. To make results more parsimonious, we presented models in Chapter Six that do not include the urban/rural indicator, noting in the tables the distribution of urban and rural cases composing each pathway.

URBAN L3 (n=9, 6 cases achieve L3)

1. cac_dichot*mhlow*EHRFUNCHIGH*EXPERIENCE*ctformlow
    a. LSHIPHIGH*
        i. anystaff
        ii. tahigh
    b. lshiphigh*ANYSTAFF*TAHIGH

RURAL L3 (n=11, 8 cases achieve L3)

1. cac_dichot*
    a. mhlow*
        i. ehrfunchigh*EXPERIENCE*LSHIPHIGH*anystaff*TAHIGH*ctformlow
        ii. EHRFUNCHIGH*
            1. experience*lshiphigh*ANYSTAFF*TAHIGH*CTFORMLOW
            2. EXPERIENCE*LSHIPHIGH*anystaff*tahigh*ctformlow
    b. MHLOW*experience*LSHIPHIGH*ctformlow*
        i. EHRFUNCHIGH*anystaff*tahigh
        ii. ehrfunchigh*ANYSTAFF*TAHIGH

URBAN NOTL3 (n=9, 3 do not achieve L3)

1. experience*cac_dichot*lshiphigh*
    a. mhlow*ehrfunchigh*ANYSTAFF*TAHIGH*ctformlow (case 14)
    b. MHLOW*anystaff
        i. ehrfunchigh*tahigh*CTFORMLOW (case 9)
        ii. EHRFUNCHIGH*TAHIGH*ctformlow (case 6)

RURAL NOTL3 (n=11, 3 do not achieve L3)

1. experience*mhlow*CAC_DICHOT*LSHIPHIGH*tahigh*
    a. ehrfunchigh*ANYSTAFF*CTFORMLOW (case 5)
    b. EHRFUNCHIGH*
        i. anystaff*CTFORMLOW (case 2)
        ii. ANYSTAFF*ctformlow (case 8)

Results for Small vs Large/Medium Grantee Size: QCA Model Output

Here, we provide the final factorizations in tree outline for the QCA models of attaining and not attaining Level 3 recognition by demonstration sites of different grantee size in the qualitative interview sample. As described earlier, these models did not appear to change the types of pathways identified, but rather tended to be associated with different pathways. To make results more parsimonious, we presented models in Chapter Six that do not include the indicator for grantee organization size but noted in the tables the distribution of grantee size among the cases composing each pathway.

GPSIZE SMALL L3 (n=6, 5 achieve L3)

1. cac_dichot*TAHIGH*
    a. mhlow
        i. EXPERIENCE*LSHIPHIGH*anystaff*ctformlow
        ii. EHRFUNCHIGH*lshiphigh*ANYSTAFF
            1. experience*CTFORMLOW
            2. EXPERIENCE*ctformlow
    b. MHLOW*ehrfunchigh*experience*LSHIPHIGH*ANYSTAFF*ctformlow

GPSIZE MED OR LARGE L3 (n=14, 9 achieve L3)

1. cac_dichot*ctformlow*
    a. mhlow
        i. EHRFUNCHIGH*EXPERIENCE
            1. LSHIPHIGH*tahigh
            2. lshiphigh*ANYSTAFF*TAHIGH
        ii. ehrfunchigh*EXPERIENCE*LSHIPHIGH*anystaff*TAHIGH
    b. MHLOW*experience*LSHIPHIGH
        i. EHRFUNCHIGH*anystaff*tahigh
        ii. ehrfunchigh*ANYSTAFF*TAHIGH

GPSIZE SMALL NOTL3 (n=6, only one does not achieve L3)

1. experience*MHLOW*ehrfunchigh*lshiphigh*anystaff*tahigh*cac_dichot*CTFORMLOW

GPSIZE MED OR LARGE NOTL3 (n=14, 5 cases do not achieve L3)

1. experience*
    a. mhlow*
        i. ehrfunchigh*ANYSTAFF*
            1. lshiphigh*TAHIGH*cac_dichot*ctformlow
            2. LSHIPHIGH *tahigh*CAC_DICHOT*CTFORMLOW
        ii. EHRFUNCHIGH*LSHIPHIGH*tahigh*CAC_DICHOT*
            1. anystaff*CTFORMLOW
            2. ANYSTAFF*ctformlow
    b. MHLOW*EHRFUNCHIGH*lshiphigh*anystaff*TAHIGH*cac_dichot*ctformlow

QCA Model Output of Challenges Associated with Level 3 Recognition

The QCA results of reported challenges for cases that achieved Level 3 recognition indicated that this outcome was associated with a varied range and mix of implementation challenges experienced by sites (see first set of QCA model output below). There were three possible solutions, with 33 possible ways to factor the first two solutions and 26 for the third, suggesting great variation in the challenges reported among cases attaining Level 3. One of the simplest factored solutions indicated six groupings of factors that all reported experiencing at least EHR or high change management challenges, in various combinations with patient, team-based, and NCQA process challenges.

In contrast, the outcome of not attaining Level 3 recognition by the end of the demonstration was associated with a single set of challenges (see second set of QCA model output below). This set did not include high change management or team-based challenges, but did include EHR, patient, and NCQA process challenges.

Challenges Reported by Sites Achieving Level 3 Recognition: QCA Model Output

Five factors (or implicants) were included in the QCA of reported challenges associated with sites that attained Level 3 recognition:

- **CMChal_Flag** (Total change management challenges high=1; 0=low)
- **EHRChal** (Any EHR challenges reported=1; 0=none reported)
- **TBChal_Flag** (Care team–related challenges high=1; 0=low)
- **PtChal** (Any patient-related challenges reported=1; 0=none reported)
- **NCQAChal_Flag** (NCQA-specific challenges high=1; 0=low).

The outcome of this first QCA model for reported challenges was:

- **L3** (attainment of NCQA Level 3 recognition by the end of the demonstration; n=14 out of 20 cases in the demonstration interview sample)

This model had three solutions:

```
M1:
    cmchal_flag*EHRCHAL*tbchal_flag*ptchal +
    CMCHAL_FLAG*EHRCHAL*TBCHAL_FLAG*NCQACHAL_FLAG +
    CMCHAL_FLAG*ehrchal*tbchal_flag*ptchal*NCQACHAL_FLAG +
    CMCHAL_FLAG*ehrchal*TBCHAL_FLAG*ptchal*ncqachal_flag +
    (CMCHAL_FLAG*EHRCHAL*PTCHAL*ncqachal_flag + cmchal_flag*EHRCHAL*tbchal_flag*ncqachal
        _flag) => L3

M2:
    cmchal_flag*EHRCHAL*tbchal_flag*ptchal +
    CMCHAL_FLAG*EHRCHAL*TBCHAL_FLAG*NCQACHAL_FLAG +
    CMCHAL_FLAG*ehrchal*tbchal_flag*ptchal*NCQACHAL_FLAG +
    CMCHAL_FLAG*ehrchal*TBCHAL_FLAG*ptchal*ncqachal_flag +
    (CMCHAL_FLAG*EHRCHAL*PTCHAL*ncqachal_flag + EHRCHAL*tbchal_flag*PTCHAL*ncqachal
        _flag) => L3

M3:
    cmchal_flag*EHRCHAL*tbchal_flag*ptchal +
    CMCHAL_FLAG*EHRCHAL*TBCHAL_FLAG*NCQACHAL_FLAG +
    CMCHAL_FLAG*ehrchal*tbchal_flag*ptchal*NCQACHAL_FLAG +
    CMCHAL_FLAG*ehrchal*TBCHAL_FLAG*ptchal*ncqachal_flag +
    (CMCHAL_FLAG*EHRCHAL*TBCHAL_FLAG*PTCHAL + EHRCHAL*tbchal_flag*PTCHAL*ncqachal
        _flag) => L3
```

There were 33 possible factorizations for the first two models and 26 for the third (a total of 92 possible factorizations). We selected the following factorization that appeared relatively simple and interpretable:

```
F01:
        EHRCHAL*ncqachal_flag*(CMCHAL_FLAG*PTCHAL + cmchal_flag*tbchal_flag) +
        EHRCHAL*(CMCHAL_FLAG*TBCHAL_FLAG*NCQACHAL_FLAG + cmchal_flag*tbchal_flag*ptchal) +
        CMCHAL_FLAG*ehrchal*ptchal*(tbchal_flag*NCQACHAL_FLAG + TBCHAL_FLAG*ncqachal_flag)
```

Expressed in a tree outline, there were six challenge "profiles" of cases that attained Level 3 recognition, i.e., those sites that noted:

1. EHR challenges and low levels of NCQA challenges *and*
    a. high levels of change management and any patient challenges *or*
    b. low levels of change management and care team challenges
2. EHR challenges *and*
    c. high levels of change management, care team, and NCQA challenges *or*
    d. low levels of change management, care team, and any patient challenges
3. high levels of change management challenges but no EHR or patient challenges *and*
    e. low levels of care team challenges but any NCQA challenges *or*
    f. high levels of care team challenges but no NCQA challenges.

Challenges Reported by Sites Not Achieving Level 3 Recognition: QCA Model Output

The same five factors (or implicants) from above were included in the QCA of reported challenges associated with sites that did not attain Level 3 recognition.

However, the outcome of this second QCA model for reported challenges was:

- **NOTL3** (not having attained NCQA Level 3 recognition by the end of the demonstration; n=six out of 20 cases in the demonstration interview sample)

This model had only one solution, with only possible factorization:

```
M1:
   cmchal_flag*EHRCHAL*tbchal_flag*PTCHAL*NCQACHAL_FLAG => NOTL3
```

In other words, cases that did not attain Level 3 recognition by the end of the demonstration did not report experiencing high levels of change management or care team challenges, but did report EHR challenges, patient challenges, and NCQA challenges.

A3. Self-Reported Readiness Assessment Survey Levels for Demonstration FQHCs

This section discusses findings for self-reported RAS levels for demonstration FQHCs.

Self-reported RAS data were used to assess sites' interim progress toward becoming a PCMH and toward site-level NCQA PCMH recognition status. Exhibit A3.1 shows how baseline RAS scores compared with final RAS scores for the demonstration sites. Of the 52 sites with Level 3–equivalent RAS scores at baseline, ten had also achieved NCQA PCMH Level 3 based on the 2008 standards at baseline. At the end of the demonstration, 85 percent of all demonstration sites had attained Level 3 equivalent scores. Of those, 9 percent had Level 0, 41 percent had Level 1, 38 percent had Level 2, and 12 percent had Level 3 at baseline. Significant gains were seen for sites at all baseline levels, with the majority of FQHC sites starting with Level 0, 1, 2, or 3 attaining Level 3 at the end of the demonstration (73 percent, 89 percent, 83 percent, and 87 percent, respectively). This shows significant progress even for sites that started with a very low level of medical homeness.

Exhibit A3.1. Frequency and Percentage of Baseline RAS Categorical Scores and Final Demonstration RAS Categorical Score

Baseline RAS Categorical Score	0 (0–35)	1 (36–59)	2 (60–84)	3 (85–100)	Total
0 (0–35 score)	0 (0)	0 (0)	12 (27)	32 (73)	44
1 (36–59 score)	1 (<1)	1 (<1)	17 (10)	149 (89)	168
2 (60–84 score)	2 (1)	7 (4)	20 (12)	141 (83)	170
3 (85–100 score)	0 (0)	2 (4)	5 (10)	45 (87)	52
Total	3 (<1)	10 (2)	54 (12)	367 (85)	434

SOURCE: RAND analyses of baseline and final RAS scores from demonstration FQHCs.
NOTES: Rows 2–4 indicate final RAS categorical scores (N=434). Percentages are expressed in parentheses. Baseline scores were collected in November 2011 and final RAS scores were collected in May 2014.

Among the 349 demonstration sites able to attain NCQA PCMH Level 3 recognition by the end of the demonstration, their NCQA equivalent baseline RAS scores were distributed as Level 0 (9 percent), Level 1 (41 percent), Level 2 equivalent (36 percent), and Level 3 (13 percent).[4] Exhibit A3.2 shows the distribution of baseline RAS scores and final NCQA levels for all 503 sites in the demonstration. The majority of sites started with RAS Level 1 (189 sites, 38 percent) or Level 2

[4] NCQA-equivalent baseline RAS scores are defined as: RAS<35 (NCQA Level 0), RAS=36–59 (NCQA Level 1), RAS=60–84 (NCQA Level 2), RAS=85–100 (NCQA Level 3).

(191 sites, 40 percent); of those sites, 76 percent and 66 percent, respectively, attained Level 3 at the end of the demonstration.[5]

Exhibit A3.2. Frequency and Percentage of Baseline RAS Categorical Scores and Current NCQA Level

	Final NCQA Recognition Level					
Baseline RAS Categorical Score	**Denied**	**1**	**2**	**3**	**Not Applied**	**Total**
0 (0–35 score)	3 (5)	0 (0)	8 (14)	32 (57)	13 (23)	56
1 (36-59 score)	2 (1)	0 (0)	16 (9)	144 (76)	27 (14)	189
2 (60-84 score)	11 (6)	1 (1)	16 (8)	127 (66)	36 (19)	191
3 (85-100 score)	3 (5)	0 (0)	3 (5)	46 (67)	15 (23)	64
Total	19 (4)	1 (0)	43 (9)	349 (69)	91 (18)	503

SOURCE: RAND analyses of baseline RAS scores and final end-of-demonstration NCQA recognition levels from demonstration FQHCs.
NOTES: These indicate final NCQA levels (N=503). Percentages are expressed in parentheses.
Baseline scores were collected in November 2011 and final NCQA levels were reported in January 2015.

[5] If we look only at the sites that remained in the demonstration, the pattern is the same, though 80 percent of remaining sites achieved NCQA Level 3 by the end of the demonstration. Of those, 9 percent had a Level 0 RAS at baseline, 41 percent had Level 1, 37 percent had Level 2, and 12 percent had Level 3.

A4. Qualitative Detail on the Relationship Between PCMH Recognition and Practice Transformation

In this appendix, we provide qualitative detail and illustration on the relationship of patient-centered medical home (PCMH) recognition with practice transformation (including both intended and unintended consequences), which is discussed in Chapter Two.

Although the APCP demonstration and evaluation focus on PCMH recognition as a main indicator of medical home transformation, the two constructs are not synonymous. Indeed, while the intended purpose of PCMH recognition, and the NCQA process in particular, is to stimulate practice transformation, demonstration site and PCA respondents also reported on occasions and conditions in which PCMH recognition had unintended consequences for practice transformation, as well as facilitators and strategies for mitigating these effects.

PCMH Recognition as Stimulant for Practice Transformation

Site leaders and providers of TA generally acknowledged the intended capacity of PCMH recognition to stimulate practice transformation, particularly by "forcing conversations" on a site's model of care, "streamlining and standardizing" policies and procedures, and providing a "disciplined process" and "structure for transformation."

> NCQA recognition can be a tool or a method to help a practice in becoming a medical home . . . I mean, it forces you to look at, what do we do for after-hours access? What do we do in terms of helping patients set self-management goals? It kind of forces the conversation.

> Recognition helps because it forces you into a disciplined process of being sure that your policy is tied to practice. So, if your policy says that you follow up with every patient who has not complied with their diabetic protocols, then they'll want to see that, indeed, on your EHR, where the follow-up call was made and the patient came back in. So it does give you the structure for transformation.

Unintended Consequences of Recognition on Transformation

However, many of the same qualitative respondents observed a variety of ways in which PCMH recognition had detracted from practice transformation. As found with many recognition or accreditation programs, these included a tendency to focus on development and documentation of policies and procedures that may "distract" and "change the dynamic" from process improvement to a time-limited, "check-box" mentality. In addition, some respondents noted an overemphasis in the APCP demonstration on NCQA recognition, particularly to Level 3. As described above, the extensive documentation requirements of the NCQA

application process sometimes precluded allowing sufficient time to implement practice changes and practice transformation.

> The coaches really want to help our health centers move the needle, and instead they're proofreading policy. I know that's not what NCQA or any other accrediting body wants, but it is just the nature of the work.
>
> Practice transformation is an ongoing process. It doesn't really ever stop and if you say, "OK, we got PCMH recognition. Put it up on the shelf." If you think of it only as trying to get recognized, it's a mindset, of "OK, we did it. We got that. Check that box off."
>
> The demonstration was supposed to be about transforming primary care practices to medical homes, but the benchmarks, the TA, they were all about NCQA recognition.

PCA leaders and coaches also perceived a rather loose association between levels or types of recognition and the degree of PCMH transformation. Many sites attaining Level 2 recognition appeared to undergo substantial transformation; for some of these federally qualified health centers (FQHCs), it may not be worth the time and effort to try to attain Level 3, especially given the difficulty of certain NCQA standard requirements or questions about appropriateness of some requirements for particular FQHC settings.

> The team was passionate about PCMH and really could have been doing more hands-on change work with our clinical teams, providers, our staff could have been doing training, but we were all working on paperwork. . . . literally, 600 documents that I had to submit to NCQA, I had to stop doing a lot of the quality improvement in order just to get paperwork together.

Conditions Contributing to Unintended Consequences

Respondents identified several conditions of sites and PCMH interventions that they felt were contributing to an unintended emphasis on recognition over transformation. These included lack of site and leadership understanding of PCMHs and the extent of transformation required, which occasionally resulted in overconfidence or an inaccurate self-conception of a site's own "PCMH-ness." A few sites put too much emphasis on the financial incentives.

Features of the demonstration and PCMH interventions that were reported to exacerbate an emphasis on recognition over transformation included long-term deadlines, such as the three-year requirement to attain recognition by the end of the APCP demonstration, as well as interim deadlines (e.g., many demonstration sites had to submit for Level 1 recognition for the HRSA cervical cancer grant). These deadlines often created a short-term trade-off between change and implementation efforts and the documentation and paperwork required to submit application materials in time.

> To be really honest with you, about 18 months ago, this became more hoop-jumping than transformation, because the deadline was looming and I think

> people thought "we've got to get this done." And what a PCMH looks like on paper and what they look like in person can be kind of different.
>
> Once you get Level 3 in [our state], you get an incentive payment through Medicaid. So there's a big push to get it done because the quicker you get it done, the quicker you can get the incentive payment. And so, that's really what is driving it and so there's no real time for transformation.
>
> There is, on the surface, a lack of understanding about what changing to this model of care really means. And that it's not going through a checklist and making sure that you're achieving or doing a narrow thing.

Facilitators and Strategies for Mitigating Unintended Consequences

Respondents highlighted several facilitators for PCMH implementation that they felt mitigated the unintended negative effects of the recognition process. One important facilitators was early site and leadership understanding of the comprehensiveness of the PCMH model and the extent of transformation it requires, as well as organizational commitment, willingness to transform, and dedication of resources and support for change. Respondents also identified that a team approach to change as improved the resilience of the transformation process. Another facilitator was FQHC experience, expertise, and infrastructure for quality improvement and change implementation.

> A lot of it has to do with how forward-thinking their management is. How supportive is leadership of transformation and understanding that it takes time and this is what is required as opposed to submitting the application just to get the recognition.
>
> I think a willingness to transform, and wanting to see change out of PCMH. Some of them just thought they were going to hang a certificate on the wall and some of them embraced the transformation.
>
> The practices that have been best at transforming have created a team. That way there are multiple people involved in the process. Those are the ones who have really, really great progress, they maintain their changes better. These are the ones, especially those that are integrating this into their quality improvement teams that already exist. It just shows every time.

The conditions just described were related to several suggested strategies to assist both TA providers and sites in mitigating the unintended effects of the recognition process so that it would be more likely to stimulate rather than detract from practice transformation.

Strategies for TA providers included ensuring early site understanding of the PCMH model and of the extent of transformation required at the beginning of the recognition process, while also reinforcing the centrality of transformation to the PCMH process and use of recognition toward that end. Respondents also noted the need to emphasize building in time for transformation into a site's PCMH effort. Some respondents suggested that site questions about documenting NCQA recognition be followed up with a challenge to consider how policy changes will be implemented and sustained. TA providers also might encourage sites to address

transformation first, then recognition. Other suggestions included providing training on improvement and change methods for sites with less experience, and engaging and developing relationships with sites early in their PCMH effort to build rapport necessary to address transformation issues. Respondents noted that TA providers also should emphasize the need for continuous transformation in the PCMH model, transformation that must continue even after initial recognition. Another suggestion was that TA providers recognize that *the level or type of PCMH recognition* is less important than *the degree of transformation*.

> That's where we as a PCA [Primary Care Association] added the most value, to help them see that this isn't just about getting an 85 or getting a 60.25 from NCQA; this is about actually changing your practice, and this is why it's important, and this is what it's going to do for your patients.
>
> When we are brought in later in the game, they just look at us as proofreaders, "just proofread my documents," and they're not requesting organizational support. But when you start from scratch with, "I'm here to help you with the practice transformation and your approach and your preparation," you just have a different relationship.

Recommended strategies for sites included using recognition as a tool for the ultimate goal of transformation and quality patient care. Respondents also suggested educating clinicians and staff on the purpose and value of PCMH transformation and possibly considering aligning PCMH and related transformation efforts into a single coordinated change plan. Finally, respondents emphasized the importance of providing dedicated staff—perhaps through separate teams—and time for change implementation.

A5. Intervention Components to Motivate Transformation to a PCMH

This appendix provides additional detail and quotations from interviews concerning intervention components used to motivate transformation to a PCMH, which are described in Chapters Two and Three. The appendix focuses first on components of the demonstration, including quarterly financial incentives, TA, and feedback reports. It then provides additional information concerning demonstration sites' participation in nondemonstration initiatives designed to support transformation to a PCMH.

Quarterly Financial Incentives

Site respondents described a number of themes relevant to financial incentives provided by the demonstration.

Lack of awareness among many interview participants of the specific uses and allocations of the funds. Few interview participants were aware of the exact amounts or uses of the per-beneficiary-per-quarter (PBPQ) payments from Medicare as part of the demonstration. Only two respondents claimed to know the exact amount of funding received. This is likely because the interview respondents, although typically located at the parent-organization (or grantee) level where payments were being directed, tended to serve in a clinical oversight and/or QI position rather than a financial role. Respondents often identified the FQHC financial officer or department as the source that could best answer details on the amount and accounting of demonstration funding.

> I could say what I think we've been using it for, but I really don't know . . . I'm not privy to it. I just know that they're letting me hire extra staff, so that's good enough for me.

> I don't how much [the payments] are. Just when I need something, especially if it's educational based, like a log sheet, logging blood pressures, blood sugars, that kind of stuff, then I'll go to the CFO [chief financial officer] and ask, "Can we order some of this stuff through PCMH?" And she'll say, "Yeah."

Typical uses of funds. Most respondents believed these funds were used for general support of clinic operations or for changes necessary to implement the PCMH model of care (see Exhibit A5.1). Funds were reported used for the following costs: staff for new roles (e.g., care manager, referral manager, patient educator); additional clinical staff if hours were extended; information technology (IT) functions; and reporting for clinical process, QI, and documentation. Recognition fees for future recertification were also mentioned.

Exhibit A5.1. Types of Uses of APCP Demonstration Enhanced PBPQ Medicare Payments Reported by Demonstration FQHCs

General Uses	Specific Uses	Most Helpful Uses
Additional staffing	• Support for new care team roles (new or expanded positions for care management, patient education, referral coordinators) • Support for current care team roles (maintaining or adding medical assistants [MAs], nurses, providers) • Raises to care team staff for additional PCMH responsibilities • Support of staff time for expanding office hours	• Support for new and expanded care team roles • Most site leaders unsure exactly how much of additional staffing was covered by APCP payments • APCP payments generally considered insufficient to cover all additional staffing costs • Unclear how additional staff costs will be sustained in future
Training on PCMH and PCMH-related care changes	• Partial support of trainer position, trainer time • Provider and staff time for education	• Support for training on PCMH changes and new care practices
General PCMH implementation	• Support for PCMH lead/coordinator role • PCMH informational brochures/flyers for patients • General support for programmatic changes, putting systems in place	• General support for PCMH changes • APCP payments generally considered less than investment that sites themselves put into PCMH implementation
Patient self-management	• Patient self-management materials (e.g., log sheets) and equipment (e.g., blood pressure cuffs)	• Not mentioned
Expanded access	• Extended clinic hours (see also additional staffing)	• Not mentioned
EHRs	• IT support for EHR changes • IT support for reporting, QI, and documentation • Development and training on EHR use (e.g., how to document care)	• Not mentioned
Unsure of uses	• Unsure of specific uses that the APCP payments supported • Speculation that APCP payments supported general clinic operations, but not certain	• Additional financial support considered important to PCMH model of care in FQHC, even if unsure of specific uses or amounts

SOURCE: RAND analysis of qualitative interviews from APCP demonstration FQHCs.

Insufficiency of demonstration payments for PCMH change and future sustainability. For many demonstration sites, the "additional revenue stream [was] not that significant," given the relatively small proportion of Medicare patients in these FQHCs, although the payments might be of greater value to smaller FQHCs.

> We do not have a large Medicare population, so with the size of our organization, I'm not sure that we could do a whole lot with what we got . . . We have only 3 percent of our patient population that's Medicare, and that's over all our sites, not just the three that were in the demonstration.

> I think [the payments] are helpful. When you have the size of our organization, it's not as significant as it would be in a smaller organization. But they're helpful because, again, we run very efficiently already anyway, so any little bit helps.

Several FQHCs mentioned the value of the payments, beyond their financial value, in helping justify a site's participation in the APCP demonstration and in supporting PCMH changes and expenditures to both leaders and staff.

> Well, we were able to use some of that money to, toward the end . . . use that as a selling point to hire more people.

> Some of that money is paying for your staff, so yes, we're asking for you to do more. But without this [additional funding], you'd probably have one or two less medical assistants and maybe not a nurse. We have a whole system of patient care partners who track all of our referrals and do all of this work. We have community health workers. We've got a robust system and some of it is supported by [the payments], even if not all of it.

Still, a number of sites emphasized that the payments were not sufficient to fully cover implementation of the PCMH model and that their outlays to implement PCMH were greater than the APCP payments they received.

> One of the biggest challenges: We're probably going to have to hire more nonclinical staff, more in the way of medical assistants, case manager–type of roles, possibly another referrals specialist or two. And there's really not that much extra money coming in through the demonstration project to support those salaries, so we're going to have to fight a little bit to get some of that money.

These sites were willing to make initial investments in practice transformation, but emphasized the need for payment models that would sustain the PCMH model of care over time.

TA Delivered by NCQA

The demonstration FQHC respondents described several forms of TA provided by the NCQA, including answering individual site inquiries, in-person training opportunities, webinars, mock surveys and other presubmission feedback (e.g., RAS audit), and reviewer and postsubmission feedback.

Responses to individual site inquiries. A number of sites reported generally positive interactions with NCQA staff in answering individual site inquiries about the application process and documentation requirements, through both individual NCQA representatives and the NCQA website.

> With NCQA, it was crucial for me, since I got thrown to the fire to develop a relationship with them . . . kind of holding our hand while I was taking over from [my previous colleague], and just making sure at the end everything was done correctly and in the most efficient way. . . . It's been one-on-one . . . very helpful and it made the process much less painful.

> I have to tell you that the person at NCQA that ran the demonstration project thing, . . . she was wonderful, she was absolutely wonderful.

> We're using the NCQA website to ask questions about the new standards. It's pretty helpful, too.

Despite the helpfulness of NCQA staff and resources in answering questions, some sites reported that turnaround times to receive replies could take longer than expected.

> And I think that our NCQA contact person was very helpful, but when she had the time for us.

> NCQA does have a question board that you can go to. Sometimes their responses take a while, but ultimately, I think if you have a record of them saying that, that's helpful.

The responsiveness of NCQA was observed to improve after a period in early 2014 when NCQA appeared overwhelmed with processing applications.

> They were not, by any means, meeting their timelines for stuff. I mean, that was really bad for a while. There was a promise of a re-review within a certain amount of time and health centers would wait and wait and wait because of their backlog. And they would call us and we'd contact our lead at PCA, and they'd contact AIR. And there was really lack of capacity at NCQA, so some of the problems were right smack on their doorstep, I think. That seemed to get better but it took calls to the Bureau.

> But I think that, truthfully, with this project going on, those people at NCQA were stretched so thin, especially in the last six months, the level of response and stuff has really kind of gone downhill, only because I think there's so much activity and it's almost too much for them to keep up with.

Other site respondents noted that NCQA limited its responses to interpretation of standards and requirements, and did not provide determinations on the acceptability of specific documentation prior to submission of an application. This frustrated some respondents, who said they were not able to obtain what they considered definitive answers on certain documentation.

> I was able to get technical assistance as to making sure that the documentation we were sending was correct. Without providing us with too much information, but just guiding us in the right direction.

A few sites reported using NCQA as their main contact for TA inquiries. As a leader from one urban FQHC explained:

> I think [our PCMH lead] has a direct line right now to the NCQA headquarters and that worked out well for us . . . to make sure that we are on the straightest path possible to attain that designation.

In-person NCQA training opportunities. Three demonstration sites in our qualitative interview sample attended NCQA's in-person, off-site training sessions and found them very useful, especially in quickly orienting site teams to the NCQA recognition model and requirements.

> I have watched their [NCQA] webinars and did an in-person training with NCQA, one of their two-day trainings . . . I think that anybody who is going to do this should go to one.

> A huge learning curve, and . . . it was an intense two or three days of training, the formal NCQA PCMH training . . . It was an eye-opening experience.

Some of these NCQA trainings were organized at the behest of a state PCA related to the demonstration, while others were regularly scheduled trainings conducted by NCQA in various cities around the country. Site respondents reported having to pay to attend the regularly scheduled NCQA sessions, as well as—occasionally—those sponsored by a state PCA; in either case, respondents considered these trainings to be expensive.

Despite the expense, one site respondent described the value of attending an off-site in-person training versus a webinar of the same content:

> The other thing for us, as far as an in-person training versus a webinar, is that when you go to an in-person training, you are there and you're present and you're participating, as opposed to when you're trying to watch a webinar in the clinic, you might have interruptions. There is potential for distraction.

NCQA webinars. Several site respondents described the usefulness of the webinars, but could not always distinguish which were conducted by NCQA or AIR.

> Throughout the webinars, different members of the team or different members of the staff that it applied to would come in and participate in those sections. We found those really helpful.

> "I think [the webinars] kind of go together so I'm not sure that I can say, 'OK, these were the ones that were by NCQA or these were the ones that were by this group.'"

However, one site respondent noted somewhat differing advice or approaches from the NCQA and AIR webinars:

> Actually, the contradictions were between NCQA's webinars and the AIR webinars . . . [I]n a lot of ways, the AIR webinars recommend more-extensive documentation than NCQA does. And so I'm erring on the side of "more documentation is better."

Mock surveys and other presubmission feedback. Only one site in our qualitative sample participated in an NCQA mock survey relatively early in the demonstration, and found the preparation and feedback to be very helpful. Other sites in our qualitative sample tended to utilize the similar presubmission reviews offered by Qualis later in the demonstration.

> The technical assistance that's been offered as we prepare for this mock survey has been extremely helpful . . . It's really helped us make sure we have our ducks in a row.

> The mock survey with NCQA and the technical assistance and support was tremendous.

Another respondent mentioned having the site's RAS audited twice and receiving feedback from those audits, which site officials then reviewed with their PCA and Qualis representatives.

Reviewer and postsubmission feedback. Lastly, three demonstration sites also discussed receiving feedback from their NCQA reviewer or from NCQA staff after their applications had been reviewed. The respondent who described receiving feedback from the reviewer was a multiple-site FQHC and mentioned the value of having the same reviewer for all sites.

> I can tell you that the last gentleman that we had, he was tough, but he reached out by email on certain things that we could tweak and he really was very, very helpful. And we had him for our last three submissions . . . And I think sometimes it helps to have the same reviewer if you're going through multiple sites, because they get familiar with what it is that you are submitting and there is so much duplication in what you're submitting.

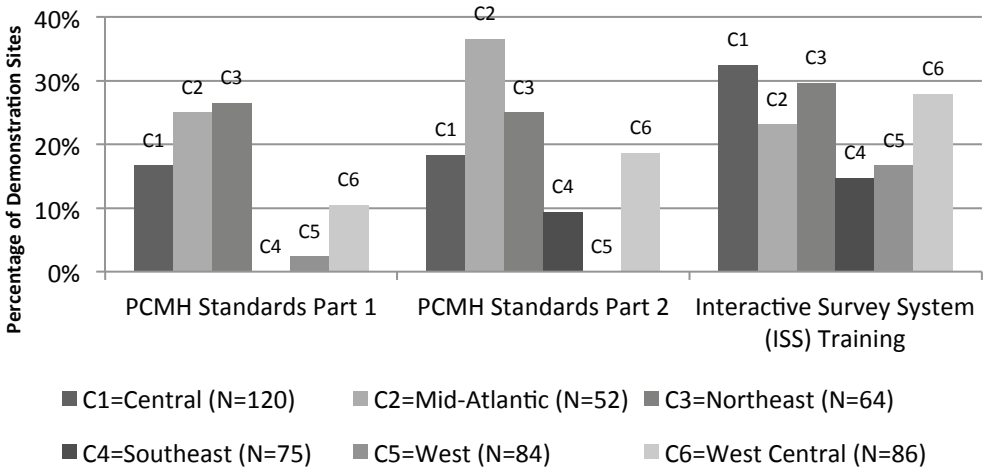
The other two sites reported receiving feedback from NCQA after their applications had been reviewed, which was helpful for future submissions.

> After we did not get recognition, we had a conference call with the NCQA reviewers and they went over some of the things, I guess tips or reasons why they felt like the documentation wasn't helpful or didn't meet the standards, which . . . was actually helpful.
>
> For initial sites, they would kind of give us a critique of the stuff we sent in, kind of what to do better going forward.

Participation in NCQA TA

Exhibit A5.2 shows cumulative participation in these webinars through October 31, 2014, by cluster. This exhibit shows that, regionally, no cluster achieved a site-level participation rate of even 40 percent for any of the three webinars. Sites in the Mid-Atlantic and Northeast clusters were most likely to observe Part One (covering standards One–Three) of the PCMH standards webinar, while only sites in the Mid-Atlantic cluster were most likely to observe Part Two (covering standards Four–Six). Sites in the Central cluster were most likely to observe the ISS training. Most of the participation took place early in the demonstration, with fewer than 2 percent of sites participating during the last year of the demonstration.

Exhibit A5.2. Percentage Participation in NCQA Webinars by Cluster



– SOURCE: NCQA, 2014, compiled by Truven.

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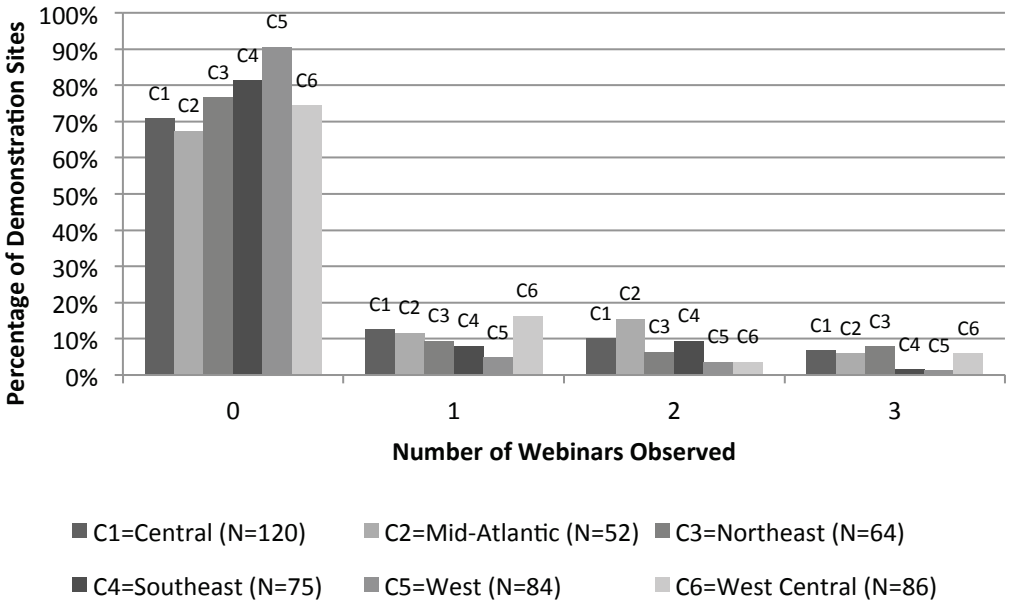
Exhibit A5.3 displays the number of NCQA webinars attended by each demonstration site. More than two-thirds of the sites within each cluster did not participate in any of these webinars, and fewer than 10 percent of sites within any cluster attended all three types of webinars. There was limited variation across clusters in the number of webinars attended.

Exhibit A5.3. Number of NCQA Webinars Observed by Cluster



SOURCE: NCQA, 2014, compiled by Truven.

TA Delivered by AIR

The two major components of AIR TA described by demonstration sites were the AIR webinars and the state PCAs, which were contracted through AIR to deliver direct TA to demonstration sites on PCMH transformation and recognition.

AIR webinars. Comments on TA provided by AIR itself centered on the series of webinars that AIR has hosted, with largely positive responses. While the initial AIR webinars reviewed general PCMH principles and features, a number of demonstration FQHC respondents also appreciated the information provided on preparation of documentation, policies, and procedures required for the PCMH recognition process. Having the AIR webinars archived was also noted as a useful reference throughout the demonstration.

Another common theme was the value that respondents placed on interacting, sharing, and learning from other demonstration participants, especially through AIR's Office Hours webinars.

> It's . . . nice to see that other people struggle with the same things we are—or, at least, we may have an idea or something, but we're really not sure. So, I know a lot of calls and webinars and things have been, "OK, we are going in the right direction." [It's] kind of encouraging us that we're not necessarily falling behind."

> I'm always on those because what I'm finding out is other people's questions are my own questions.

> I depend on those Q&A things. It's easier to do it that way than if I put in a question—it takes a couple days to get a response. So I make a list of all my questions for the next Q&A session.

> The Office Hours, those were the most helpful, because they were real specific on documentation stuff. And I wish I had really plugged into that earlier.

At the same time, other respondents in the baseline interviews found some content to become repetitious, if helpful, suggesting further differentiation of sessions for sites at different levels.

> The [webinars], those have been—it depended where we were at. I sometimes felt that we were further ahead than some of the other participants, and a little bit of it was repetitious. But for the most part, we'd get something positive out of all of those.

> And they open it up to questions and everybody has a different need. And they have to answer everybody's questions. And it frustrates some of the folks that are there for . . . a higher level, that are very close, when you have the folks in-between asking questions and you don't relate to it.

State PCAs. Site respondents described a range of TA received from their state PCA through the demonstration, including practice coaches, regular webinars and group conference call meetings, in-person training events sponsored by the PCA (including presentations by NCQA TA staff), and PCA website and newsletter communication tools. Many respondents described practice coaches as a valuable resource who were capable of performing a number of functions:

- answering specific PCMH transformation and recognition questions

- reviewing policies and documentation (including presubmission reviews)
- serving as a conduit for and navigator to other demonstration resources (including Qualis and NCQA)
- visiting sites and meeting with PCMH teams and site leadership
- regularly checking in with sites and encouraging progress.

The PCA leader interview respondents described a similar range of TA services. They ranked the practice coach as one of the most valuable components of PCA TA, and discussed particular features in greater depth, such as helping filter and navigate other TA resources for sites; coaching sites on how to best interface with other resources, such as NCQA; occasionally acting as "good cop–bad cop" in interpreting feedback with Qualis or others; and serving as advocate and educator for PCMH efforts with site leadership. PCA leaders also reported that, although uptake for site visits was variable (due to willingness and capacity of both sites and PCAs), such visits often proved highly valuable when they occurred.

In addition to the specific TA components, respondents discussed several general issues related to the TA support provided by the PCAs, including:

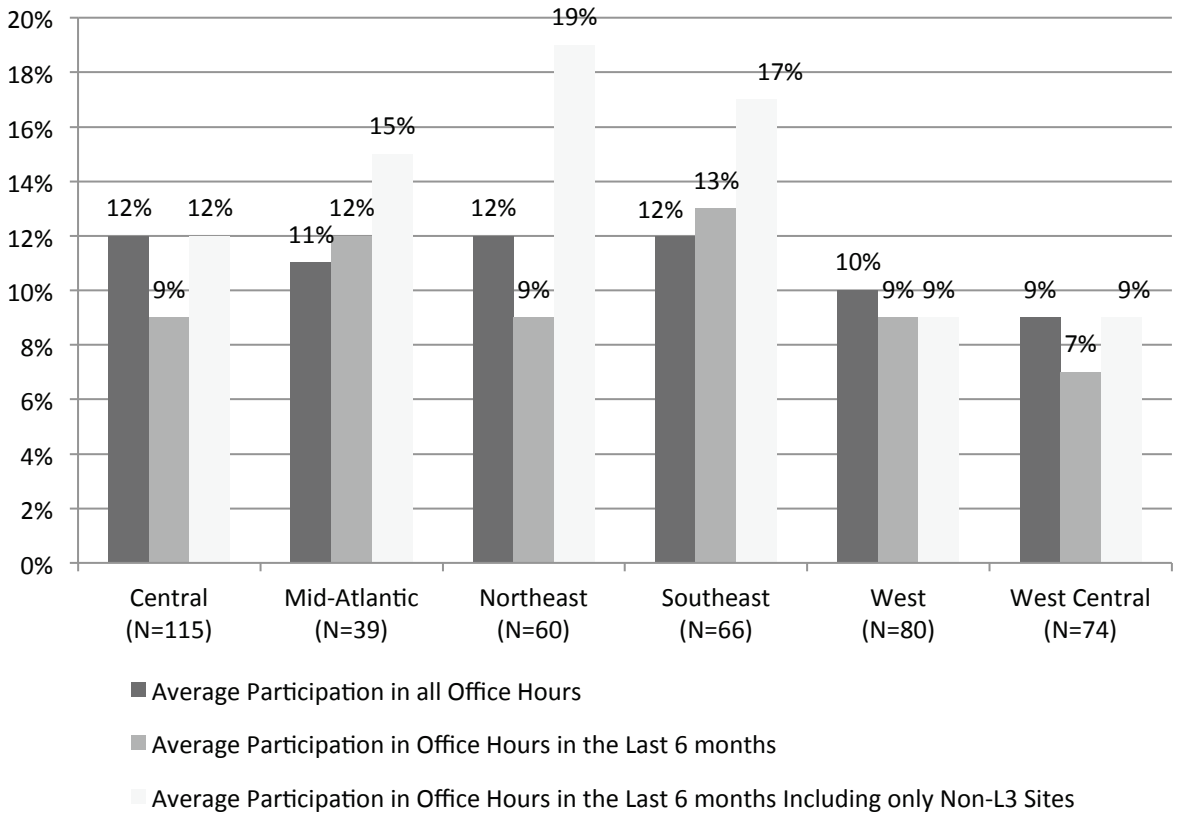
- the late start for providing PCA support for the APCP demonstration
- PCAs' key role as conduit, tailor, and coordinator of information, best practices, and other TA resources
- PCAs' role in prodding and encouraging demonstration sites, including maintaining emphasis on PCMH transformation as well as recognition
- variability in site reliance and expectations of PCAs.

PCAs also provided a few PCMH-related supports outside the scope of the APCP demonstration (such as a statewide PCMH learning community, which started prior to the demonstration), which are described in the section on nondemonstration PCMH supports used by demonstration sites.

Participation in AIR TA

Exhibit A5.4 shows overall participation in all AIR office hours as compared with participation in webinars during the last five months of the demonstration for all sites and for sites that did not already have NCQA Level 3 at the start of that six-month window. Average participation in all office hours differed only slightly among clusters, with the Central and Northeast clusters having the highest participation (12 percent) and the West Central cluster having the lowest participation (9 percent). Average participation in webinars during the last six months of the demonstration varied from 7 percent in the West Central cluster to 13 percent in the Southeast cluster. Sites that had not attained Level 3 as of April 22, 2014, were more likely to participate in office hour webinars than the overall average, with 19 percent of non–Level 3 sites participating in the Northeast cluster and 9 percent in the West and West Central clusters.

Exhibit A5.4. Average Participation in AIR Office-Hour Webinars by Participating FQHCs Stratified by Regional Cluster



SOURCE: AIR, 2014; CMS, 2014, compiled by Truven (recognition data provided to RAND on April 22, 2013, for starting the six-month window).
NOTE: Darkest bars represent average participation in all office-hour webinars; middle-tone bars represent average participation during the last six months; and the lightest bars represent average participation during the last six months only among sites that had not yet achieved NCQA Level 3 recognition.

Specific PCA TA Components

PCA practice coaches. More than half of the demonstration FQHCs in our qualitative sample specifically described working with a PCA practice coach. In almost all cases, the coach was perceived as a valuable resource and key conduit of PCA TA. Coaches answered questions, provided tools and templates, and connected sites to other demonstration resources (such as Qualis or archived webinars) and to peer FQHCs with expertise. They also reviewed recognition applications and conducted presubmission reviews, reminding sites of upcoming events and deadlines, staying in regular contact on site progress, and helping with PCMH change bottlenecks.

Site leaders at baseline and follow-up interviews described the important, and multiple, roles that the PCA practice coaches provided:

> I think the coach is very helpful. We had questions about our particular factors and I emailed her, and she helped us to clarify the requirements of these factors. And she also sends email reminders of the webinars.
>
> I email and the coach sends all kinds of tools, and [the state PCA] has a resource PCMH that we can go to. The tools that other people are using . . . You can ask our coach anything and she'll find out.
>
> We also had a coach assigned to us from the primary care association, [who] helped us review prior to submission. So that was helpful.

Coaches providing one-on-one answers to specific questions and help in managing the PCMH change process. PCA leaders pointed out how much of that coaching happened through email and phone contact.

> A lot of the work that we did was basically providing technical support to the health centers via calls. So, for example, if they send an e-mail or call us with certain questions, with certain focus questions, then we would be able to provide assistance in that way.

PCAs also built up archives of policies and procedures to share with demonstration sites to help as examples and templates of the documentation that might fulfill the recognition requirements.

> I think having some examples of policies and procedures that met the requirements, having that library of stuff that made compliance easier, that the sites can work with, really helped. . . . The sample documents proved to be very helpful to get sites going in the right direction.

In addition to specific documentation questions, PCA coaches also helped sites with broader PCMH implementation issues, such as creating work plans and engaging site leaders.

> And I really talk about that with the medical directors and the other lead people in the organizations, and plan the strategy, then, of what they needed to do to further their work.

These more–in-depth forms of engaging sites in PCMH implementation were also particularly evident in the site visits conducted by PCA coaches. Site visits provided opportunities not only for PCA coaches to make more-personal connections with sites, but also to facilitate more-active, "hands-on" engagement of both PCMH change staff and FQHC leaders.

> But initially, what we did was have that retreat, which was great, because everyone was very involved. About a month after we did that retreat, we had our practice coach from the PCA come down and talk with us about her process. She's been our coach and she's also an NCQA certified content expert. So she helped us to develop a plan of attack.
>
> It was shortly after I started, the PCA people came down here, actually, a number of them. The quality person was very supportive and says, "You know, I'll help you with whatever you need." And so they've been very supportive.

PCAs noted variable uptake of site visits, but that they tended to be very helpful to sites and valued for the "hands-on approach" and chance to work through issues on-site. Demand for site visits also appeared to increase in the last year of the APCP demonstration.

> I've offered up and let the lead people know in each of the organizations that site visits were available if they needed, but there were only two organizations that actually took me up on that. [When] I've gone out, one of the things we did was go through the documentation onsite. So, if they had done a submission of the survey, and they were going to need to do an add-on survey, because they hadn't gotten to Level 3, then I would go out and help them plan their strategy for what they needed to do to get more points.
>
> The health centers liked it when there was a meeting at their site, so they could actually sit there and pull up something from their EHR and walk it through the process. So it was really that hands-on approach that was very helpful.
>
> Probably the biggest difference this last year, starting [at] the beginning of this year, I was getting asked to do more presentations to providers, because they were seeing some issues with how they were coming on board, with documentation. And so I was going out and doing a lot of presentations.

Coaches connecting and coordinating other resources for sites. Site leaders noted that a key function of the PCA coaches was to help sites navigate, identify, and prioritize the multiple TA resources of the demonstration, which often proved "overwhelming."

> Yeah, there was a lot of stuff going on. That was actually a little confusing, truthfully. Having the PCA coach was super helpful, because she could be like, "there's this and there's this." And I'm sure I probably got an e-mail that said there's Qualis, but the problem is, and the majority of people I talked to [at other sites] were like me, who were doing 12 million other things and trying to get PCMH documentation together. And so there's some point at which you get so many things in your e-mail and you're just like, "I don't even know what this is, and I can't even sit down and take time to look at it." So, the PCA coach was very helpful in that way, because she'd be like, "no, you need to do the Qualis thing," or "you need to pay attention to this," so that was helpful.

PCA leaders likewise discussed how the PCA coaches intentionally took on a lead role to "orchestrate" and "filter" the demonstration TA resources for sites:

> We approached this as we were the lead resource for the sites, in a sense. They were expected to participate in the AIR calls, because that was part of the project. But when we saw that the Qualis TA was going to be so helpful, we pushed people in that direction. So, we kind of took the lead and orchestrated, if you will, the focus of where they were going with the resources that were outside of the PCA.
>
> I think that having a coach as a one-to-one pair helped out a lot, because the coach could filter what was going on. I don't think the APCP sites and the staff that were working on that had the ability. It was just sort of information overload, and they didn't even have the bandwidth to figure out what was relevant and what wasn't. But the coaches, that was their job.

PCA leaders noted that an important resource was linking sites to other FQHCs that had prior experience and success with PCMH transformation and recognition, a form of encouraging direct peer-to-peer learning.

> We had one FQHC with three sites that used Qualis extensively, and the site PCMH lead was an anomaly because this was her main focus—the PCMH and succeeding at it. So she was a great, valuable resource to other health centers for an example, someone that you could reach out to and ask, "Hey, how are you doing this? We have a couple health centers asking about this." And she'd share. She'd share those documents so it was perfect.

However, coaches most often led demonstration sites to other national partners, particularly NCQA and Qualis. With NCQA, PCA coaches helped sites understand how to interface best with NCQA and joined sites on calls to facilitate discussions with NCQA staff.

> I had canned responses where I explained, "This is what sounds like is happening. This is how you'd solve it. You need to get in contact with this person at NCQA. Your coach can be on the phone with you. You, as the health center, are going to get a better response because NCQA wants to protect your privacy." And then we have coaches conferenced in on any communication. And I'd also always cc or forward to my AIR liaison so she could track the challenges that people were having. And now, I'm sad that the demo is ending because I think these all work really well.

With Qualis, PCA coaches developed an even more collaborative arrangement to assisting sites, which in some instances could take the form of a "good cop–bad cop" approach.

> Qualis is able to do mock surveys and their reviewers are excellent. And even though it's totally duplicative of what our coaches were doing, it oddly was helpful in some ways. Because, as a PCA, we have a little bit gentler relationship with the FQHCs, because there's a customer service component to what we're doing. And health centers didn't want hear things from us like, "This is not what NCQA is looking for. And I know it makes sense to you but it's not going to meet their requirements." So our coach would have multiweek conversations with the site, and the health center would say, "But this is all I can do. I think it makes sense." And then for Qualis review, the site sends all their materials in and Qualis writes a full report that states, "I'm scoring you 0 out of 15 here because NCQA is really specific. This is what they want. What you have doesn't meet it." So there was like a "good cop–bad cop."

This collaborative approach between PCAs and Qualis appeared valuable to sites as well, as noted by one site leader:

> I think having [the PCA practice coach] and doing the Qualis were the two really nitty-gritty, most-effective things.

Coaches regularly checking on sites. Lastly, site and PCA leaders described the key role of PCA coaches in regularly checking on sites. In addition to letting coaches know whether sites needed specific help or referral to other resources as discussed above, the regular checking-in reflected a mix of both prodding and encouraging sites, keeping them on track in the demonstration as well as introducing a measure of structure and accountability to the PCMH journey.

Site leaders described and valued how PCA coaches maintained "constant contact" with sites and kept them "in the loop."

> Yeah, our PCA coach would reach out and say, "Hey, how are you doing? Do you have any questions? Hey, just a reminder, this is what's going on." They'd send out a newsletter and then have links for the collaboration website and would help us through any issues that maybe we were having.

PCA leaders similarly described regularly reminding demonstration sites that PCA staff were available to help, and maintaining a coaching relationship to keep sites on track and even persuade certain sites to stay in the demonstration.

> We've been working with these folks for a long time, so they knew who we were, but just made sure that they understood that we were here for them and what services we were able to provide for them. So, yeah, absolutely, we did some one-on-one coaching with the health centers, even talked one or two into not dropping out of the demonstration when they thought that that's what they wanted to do.

Other PCA leaders emphasized how the one-on-one coaching enabled sites to structure and focus on their PCMH effort.

> I really think that what really helped was the one-on-one coaching, as time-consuming as that is, but I do think that that really helped, because it allowed the health center to really focus on the work that they needed to do. So, if they knew that I was coming out to the health center on a particular day for a set period of time, their time was focused on PCMH and the work that needed to be done, as opposed to kind of being pulled in different directions. So, I think that was very helpful.

> We've tried to promote the idea of getting this done for a variety of reasons, not the least of which is you entered into this project saying you'd get to a Level 3 by October 31 of 2014, and here's where you are, and here's where everybody else is. So, I mean, we've had some pretty frank discussions sometimes with the executive leaders of these organizations and sometimes that's been very helpful.

PCA leaders also emphasized the role of the PCA coaching in helping sites maintain focus on PCMH transformation as part of the recognition process.

> The unintended consequence of the very nature of the PCMH recognition process is that, rather than rising to the practice transformation challenge, we sink a step or two below and we're simply focusing on documentation, on getting those points, but we don't then translate that into true transformative change and so there's a disconnect. That's a challenge because the coaches really want to help our health centers move the needle and instead they're proofreading policy . . . So, the coaches have all been trained that whatever question they may get, which is typically around "does this policy meet this standard," the follow-up question is always, "yes or no, but then how do you really intend to implement it and what change do you have to support to insure that this is something that you can sustain long-term for the benefit of the patient?"

> So, our work as a PCA is to keep them thinking about transformation and what that means and what that will look like. And one of the things that I say to the health centers is, you know, if you fall within that audit percentage for NCQA, they're going to come and ask you, "You said you were doing this, show me if you're really doing it." So you want to be able to show them that you're really,

> actually, doing this work of transformation that you claim to be doing. So, we try to encourage them to continue that.

Regular PCA webinars and group conference call meetings. In addition to the national demonstration webinars organized by AIR, several of the PCAs also conducted webinars and group conference calls on PCMH and PCMH-related topics, which were available to APCP demonstration sites. Some of these virtual meetings were developed by PCAs specifically for the APCP demonstration; others were part of wider PCMH and QI educational series for the wider set of FQHCs in the state served by the PCA.

A number of sites found the PCA organized webinars and group conference calls to be particularly helpful in peer-to-peer learning and understanding best practices.

> The state PCA provided us with webinars. Sometimes it was weekly or monthly. We would have a speaker who would present on the various different PCMH areas. And then we had an opportunity to ask questions and hear how the other FQHCs were doing.

> Well, the PCA had monthly or bimonthly meetings, so that helped. I mean, I had that personal contact with the folks [at the PCA], but also got to listen to the other FQHCs in the state are going through the same and similar processes.

PCA leaders likewise described webinars and group calls that they offered demonstration FQHCs, and the added value they provided in terms of repetition and intimacy for group interaction, peer-to-peer learning, and situating experiences in familiar contexts, even if some of the content overlapped with the national webinars offered by the demonstration.

> For example, we had a webinar and tried to talk about documentations that were deemed to be approved by the health centers—and these are documentations that were shared by health centers that achieved Level 3 recognition. We also looked at the different "must pass" elements and that was more like an open forum, [we] talked about the different struggles and challenges that people were having with the must-passes. So, that was more of a call of sharing best practices . . . It was more about kind of talking to each other and sharing what worked.

> So AIR paid for Qualis, but we also did, because we had our own group calls . . . We've also done leadership development training. We have done numerous webinar series on understanding the PCMH 2011 standards. And we'll start in January doing the 2014 standards. We brought in Qualis and did their eight change concepts. We did that for senior leadership, as well as the staff that are involved in practice transformation.

> Like AIR, we utilized Qualis, an expert at Qualis, for some of our webinars as well. . . . We're working with a bit of a smaller group, and so you have more of an opportunity, and we saw that centers felt a little bit more comfortable asking questions. They were able to ask those specific questions that they were particularly dealing with and don't necessarily get a chance to do a lot of times on the larger calls, if you're able to ask questions at all.

In-person training events sponsored by the PCA. The PCAs also were integral in providing direct, in-person training opportunities to sites. In some cases, this included sponsoring local training sessions by the other national demonstration partners, NCQA and Qualis, which

sites found valuable, as described elsewhere. Site leaders especially appreciated the PCAs' sponsorship of NCQA training, as they considered the cost for attending training directly through NCQA to be expensive. However, PCAs also provided a range of PCMH-related training by internal or contracted experts (e.g., motivational interviewing for engaging patients, developing improvement work plans and quality measurement). As with the PCA webinars and group calls, these training events were occasionally developed solely for demonstration sites, but often open to the wider set of FQHCs served by the PCAs.

> Our primary care association made NCQA training available because the PCA had a big push here in our state to get all the centers recognized. And then, even our local consortia got all the FQHCs around the area and for all of us to share best practices. And they got some grants to train, for example, our staff on motivational interviewing, on communication, on medication reconciliation, a lot of different things. So there was definitely a big push.

> The state PCA put on a seminar by a quality expert who was fantastic. She was part of another state PCA, but our MPCA brought her in to do a presentation for us, a one-day presentation on quality work plans and what HRSA would be looking for, and also reporting. And so, when we got done with that conference, we came back and said, "OK, it's great," because we had four pages, for example, of just clinical quality measures that we tracked.

PCA leaders also discussed how they organized these in-person training sessions to be accessible to FQHCs across their states, and how PCMH-related education is integrated in many of their regular training opportunities for FQHCs.

> The PCA provides a significant amount of training to health centers, either through face-to-face meetings or webinars. And this year we've continued that work, focusing on what we call quality improvement, but so much of that falls within the realm of implementing PCMH or practice transformation. So, things that we did this past year would include, again, motivational interviewing, which we continue to do for the health centers almost on a continual basis, because of staff turnover and the importance of using motivational interviewing to engage patients, which is a big part of the—big part of [PCMH].

PCA website and newsletter communication tools. Site leaders reported occasional receipt of PCA communication related to the APCP demonstration through PCA websites and other electronic media, such as an email newsletter. These PCA resources appeared to be used in conjunction with, rather than in place of, the national online resources.

> I did go out to the collaboration website, the CMS collaboration site. The state PCA has a site. I would go out there too.

> Then web links came out from the PCA, and I'd always use those to make sure that I understood what was certainly necessary, but also kept me on task in terms of making sure that everything was annotated, and made for a smooth application process.

> The PCA would send out a newsletter and then have links for the collaboration website and would help us through any issues that maybe we were having.

Leaders from PCAs who developed such tools discussed how the purpose of these communications was to help digest and point out TA resources for the demonstration sites.

> We (the PCA) did a weekly digest newsletter for the sites with just a couple key things and reminding them of some resources. We didn't bombard them with information, but a reminder of Office Hours, or to remember to use this resource, some best-practice stuff.
>
> We started narrowing that stuff down in a newsletter, that digest type model, so that people just weren't overwhelmed with all of the emails from everybody. So we really tried to keep ours to a minimum. So cataloging that stuff was certainly useful. And then if people had questions on what the interpretation was of that description of the factor, or the element or the standard, I think having that cataloged was helpful.

General PCA TA Issues

PCA TA support for the APCP demonstration started later than would have been ideal. The majority of respondents spoke positively about the support that PCAs have provided to demonstration sites, but some indicated a wish for their state PCA to have been involved earlier in the initiative.

> That part of it [the PCA] has been good. I just feel like we found out about it maybe too late, though . . . but then their site didn't come up for a while. So, that help would have been more helpful earlier in the process.

PCAs' key role as conduit, tailor, and coordinator of information, best practices, and other TA resources. A common theme on the PCA TA was its value in helping to share best practices, interacting with sites that had successfully attained recognition, and teaching successful solutions to PCMH implementation and documentation in both deeper and practical terms.

> The [state] primary care association has hosted some two-day events where you can go and do nothing except go through the standards with the specialists from NCQA. That's really invaluable, because it's different when you read it on paper than when you have somebody there to really bring it to life.
>
> We had a webinar, I think it was probably three months ago, where we had the ability to conference call with other health centers, and just to go through and see exactly where they were in their stages, and problems that we had and how they had solved similar problems or approach similar problems. So I think that was of great assistance.
>
> We had some work within our PCA that allowed us to be able to really see someone who had actually done a successful application, which is kind of important.
>
> My practice coach is through our [state PCA] . . . They've just been very supportive. Also, the education that you get from them, whether it be seminars or just . . . we have a quality network now, where we meet quarterly, with all the other FQHCs in [the state].

A few respondents also commented on the ability of their state PCA to help tailor TA to the needs of sites struggling with PCMH concepts and flexibility in using PCA resources.

> The engagement of the local PCAs has been very helpful. Initially, provider groups were really struggling trying to figure out what this all means. And so, the PCAs have been breaking this up into smaller parts and helping people understand—well, the survey process . . . and helpful in demystifying . . . the challenges that go with moving towards the medical home model. They're also helping deliver it in smaller bites, so that, again, it's just not so overwhelming.

As noted above, PCA coaches also provided particular roles in navigating, filtering, and orchestrating other TA resources. They also worked closely and developed collaborative approaches with other national demonstration partners to provide TA to participating sites. One site leader especially noted the development of these collaborative relationships.

> I guess the thing that I really, really enjoyed more than anything is to see, finally, our state get together with a national organization like an NCQA—and solidify those relationships and start to work toward the same things. Because then it brought NCQA, it brought CMS, the state PCA, and us together, working in the same direction instead of against each other. That was exciting for me.

PCAs' key role in prodding and encouraging demonstration sites. Both demonstration site and PCA leaders identified regularly checking in with sites and encouraging progress as a particularly important function. Both sources described how this helped remind sites of their accountability and inspired them along, in some cases persuading sites not to drop out of the demonstration. PCA leaders reported that this occurred throughout the demonstration but increased greatly in the final year.

> We've had much more frequent contact with all of the organizations who had sites in this project. We had six organizations and 25 sites in the project and initially we kept touching base with people, but this last year, especially the last, I would say, six months, we've had pretty frequent contact both by phone, by email and then . . . quite a few site visits as well.

Variability in site reliance and expectations of PCAs. In three states, however, one FQHC respondent perceived the PCA TA to be relatively unhelpful or stretched. One respondent said, "[the PCA] hasn't provided much assistance. . . . They have some conference calls and things like that. To be honest with you, the participation is pretty low."

Some of these divergent perspectives may stem from sites being at different levels or points in their PCMH change and recognition process. For instance, in one state in which the PCA was lauded as "a huge resource" and "helping deliver [the medical home model] in smaller bites," another demonstration site described the PCA's review of two standards per meeting as "a really slow process, and they've been learning right along with us. So I really can't say it's been that helpful."

Likewise in another state, one demonstration respondent who was more positive about the PCA's efforts still perceived the assistance to be of less use, given their level of progress. "They have done some things, but, again, we're kind of ahead of their curve as well. So I tend not to

dial into those because we've already done the work that they're working on."

> A: It was mainly the coach. I think the PCA just really connected us to the coach. I don't think they really had a lot of knowledge about the NCQA process.
>
> Q: Got you. And so was the coach at all helpful?
>
> A: There was one person that came here and met with us and I think she was helpful but it didn't feel like she was . . . We never really felt that we received a real yes or no answer, an answer like, "Yeah, this is really good." We had suggestions but it was, like, hit or miss.
>
> Q: So you weren't really getting the specific feedback you needed to feel confident that you had fixed that referral document or something.
>
> A: Right. It was that confidence level, like they never really knew exactly what . . .
>
> [The PCA expert] did, for other health centers, come out and do presentations, she was certainly available to do a lot, it's just our time schedules just didn't work well to have that happen, but she's in [location], which is not too far from us and she was very helpful in that the PCA is where we really do our patient satisfaction, through our PCA.

TA Delivered by Qualis

Both the demonstration site and PCA leaders in the follow-up interviews described Qualis as a key resource during the last year of the demonstration. Both the site and PCA leaders highly valued Qualis expertise on PCMH implementation, particularly the NCQA recognition requirements, and considered the responses and feedback of Qualis consultants to be authoritative, instructive, and timely. PCA leaders reported working collaboratively with Qualis consultants, and occasionally would use Qualis as a final authority or check on issues. Leaders of at least one PCA also viewed Qualis as a resource that they intended to use going forward after the APCP demonstration in their PCMH and other assistance to community health centers.

Qualis expertise in answering specific NCQA application and documentation questions. Site leaders found Qualis' expertise in answering specific NCQA application and documentation questions to be very helpful, and the responses of Qualis consultants to be authoritative and timely.

> Yeah, I reached out to Qualis a couple times. Mostly just for clarification whenever our PCA coach or our local experts weren't available. We had a pretty rapid transition and—if you get stuck on some of the electronics and what is required with NPI [National Provider Identifier] numbers and license numbers and things, they helped me through that.

All PCA leaders we interviewed held Qualis' expertise and the assistance they provided to demonstration sites in the highest regard.

> I truly think that Qualis, when people would utilize them, Qualis was very helpful.

> We did encourage our sites to take advantage of the Qualis services that were available to the project. And we had several sites that took advantage of that and found it extremely valuable.

PCA leaders likewise noted how Qualis consultants made themselves highly accessible and linked sites to other resources, such as the Safety Net Medical Home Initiative website materials.

> Our contact from Qualis . . . We honestly can't say enough about her. She was awesome. I love her.

> For those who took advantage of the technical assistance by Qualis Health, I think that was helpful, very much so. And they also had access to the Safety Net Medical Home Initiative website, where they downloaded it a lot of the materials off that website.

Qualis presubmission reviews. In the follow-up interviews, all site leaders who utilized Qualis for a presubmission review found it highly helpful. In particular, the site leaders valued the Qualis consultants' in-depth knowledge of NCQA requirements, the nuances of writing policies and presenting documentation of care in ways to match reviewer's (often unstated) expectations, and ability to help plan out a site's effort to develop both initial and add-on applications.

> The utilization of the Qualis expert was a great tool. After being beyond frustrated, . . . I sent the documentation over to the Qualis contact to pinpoint just what wording to use, because I look at a procedure and I'm like "[the policy] is clearly stating that." But many times, it was just adding a word that the NCQA reviewer would look for or formatting it in the manner that would make it easier for the reviewer to look at or just the little tips that they gave—I mean the feedback that Qualis gave, was very, very helpful to our add-on process.

> I used her starting before my initial submission. I was in a pinch of time, so I focused on the must-passes with her. Then, after I submitted and we got the Level 2, she had me send her everything, the complete survey with the examiner's remarks and all that stuff. And we made up a new plan, and she had a little grid sheet, oh, my gosh, she just said, 'OK, this is what you tried for. This is why you got that score. This is what you need to do to get there.' She just led me down the right path.

There were also site leaders who said they wished they had used Qualis, or had used Qualis sooner, to review documentation and save them time on the application and avoid re-submissions.

> Quite honestly, I didn't [use Qualis], and there is a part of me that regrets not reaching out to them, because they might have saved me having to do re-submissions. . . . I mean, that's another pair of eyes looking at something that gets interpreted differently by different people.

PCA leaders similarly reported that the Qualis presubmission reviews were a valuable aid to sites for their NCQA application.

> The ones that did [a Qualis presubmission review], they found it extremely helpful. We got really positive feedback. Any time any of our health centers worked with Qualis, we got tremendous feedback.

> I know people who have used the Qualis mock survey through the CMS program and it's been excellent.

Working collaboratively with PCAs to provide direct TA. Sites reported being linked to Qualis by referrals from their PCA coach or through Qualis trainings that their PCA organized, which were also highly valued.

> Oh, mercy, I would have just sunk without my Qualis expert. . . . I would send her what I had done, all the documentation. She would look it over and then direct me—if I was on the wrong page, or if I was looking at it wrong, or better ways to do things. And she was just absolutely phenomenal and I learned a lot from her actually. . . . And she would just say, 'that's not what they're asking for, now read it'—and she'd just spell it out.

> We got hooked up with Qualis through the PCA. The PCA did a training in January where someone from Qualis—it was an eight-hour training, went over all of the standards, gave us examples of documentation and, in fact, I actually used one of the procedures given by Qualis for one that wasn't accepted in our initial NCQA review. But I did find that eight-hour seminar to be very, very helpful.

PCAs appeared to develop complementary roles to Qualis in assisting sites. As described in the section on PCA-provided TA, this could take the form of "good cop–bad cop" (with the PCA being the former and Qualis the latter). Similarly, the PCA might use Qualis as the final authority or check on a review, as reported by a site:

> I took all my stuff up to my PCA coach and let her look at it. She reviewed it, and then she told us about the Qualis review and so we submitted all our stuff to Qualis as well. And that was pretty intimidating, because . . . they sent me back a 52-page document and they scored us like a 50 and I was like, argh! But it was stuff like, "this wasn't dated, the date range wasn't on here, your process implementation date." So, they were really, really sticklers about it.

PCA leaders further discussed their collaboration with Qualis in assisting specific sites, and how Qualis took care to "keep everyone in the loop" and maintain a "three-way conversation" among the site, PCA, and Qualis. As one PCA reported, they also valued these exchanges as a way to improve their knowledge and learn from Qualis' expertise.

> Qualis was available to anyone in the project and you could contact them directly. They removed a barrier. . . . And the two consultants that worked in our area always copied us, so we got to see what the question was, what the consultant said. You know, "if you would do this, this, and this, I think it would meet the expectation." And so they did a very good job of keeping everybody in the loop and informed about what was happening or what concerns were coming up by individual health centers.

> We were copied on all of the questions that sites submitted to Qualis. And then we also participated in the review for one of our sites when they had their document presubmission review. So that was very, very useful. I save those emails; then I could reference back if someone else asked me a question I've seen, what Qualis may have said to another site.

Feedback Reports to Motivate Transformation

RAS scores. In the baseline interviews, most demonstration sites indicated that the biannual RAS results were readily available and helpful to one degree or another in monitoring progress toward PCMH recognition. However, by the follow-up interviews, nearly one-fourth of the demonstration sites considered the RAS results to be less helpful:

> There were a couple of times where we were chosen for the RAS audit and we didn't really get a lot of feedback. They would just give us the result but no . . . They said "Well, you did wrong." or "This is where you could've done better for next time."

> [The RAS] wasn't helpful, to be honest. It was because of those reports that I really thought [our FQHC] was meeting the standards at like a 90-percent rate, because that was the information that was provided back to me in the report. So that score didn't really—I mean, I thought it would be helpful, but it really was not a good capture of how your practice was performing.

Utilization and cost reports. Site leaders in the baseline interviews who considered the Medicare data of potential interest struggled with how to use the reports, suggesting this as a future topic for TA:

> Yeah, 'the how' is a big question. I mean, [the Medicare information] is very interesting and I think it's useful data. I'm just not sure how to make use of it.

> I'm not sure if they're going to have future webinars, or something like that, on what other health centers are doing with the data or how to affect it. It would be beneficial for us.

The only two site respondents in the follow-up interviews that found the reports helpful were relatively advanced sites that primarily used the information to help identify patients with utilization patterns. One site gave the data to the nurse care manager at the clinic level; the other noted that the demonstration feedback reports—despite their limitations and overlap with later utilization data from its accountable care organization (ACO)—were helpful in corroborating other sources on "frequent flyer" patients.

> We did share that [quarterly Medicare data report] with the team. And they looked at those because they had some hospitalization data and who had been a "frequent flyer" in the ER [emergency room] and that type of thing. So that was somewhat helpful for the nurse at the clinic.

> Oh, it was great! Before we started getting any ACO feedback information, we definitely used that information. I still use it all the time. It's not 100-percent accurate, that's for sure. They gave us information like the primary care charges and the hospital charges and the specialist charges, and I'd see that they had, like, these very minimal charges for primary care and then I looked up that patient in our EMR and they'd been in six times and racked up all these charges. So it wasn't always correct, but it was good nonetheless.

Another respondent noted they did not use the reports because they already collected similar and more-timely utilization data, but mentioned the reports might be more useful to sites that had less-advanced data systems:

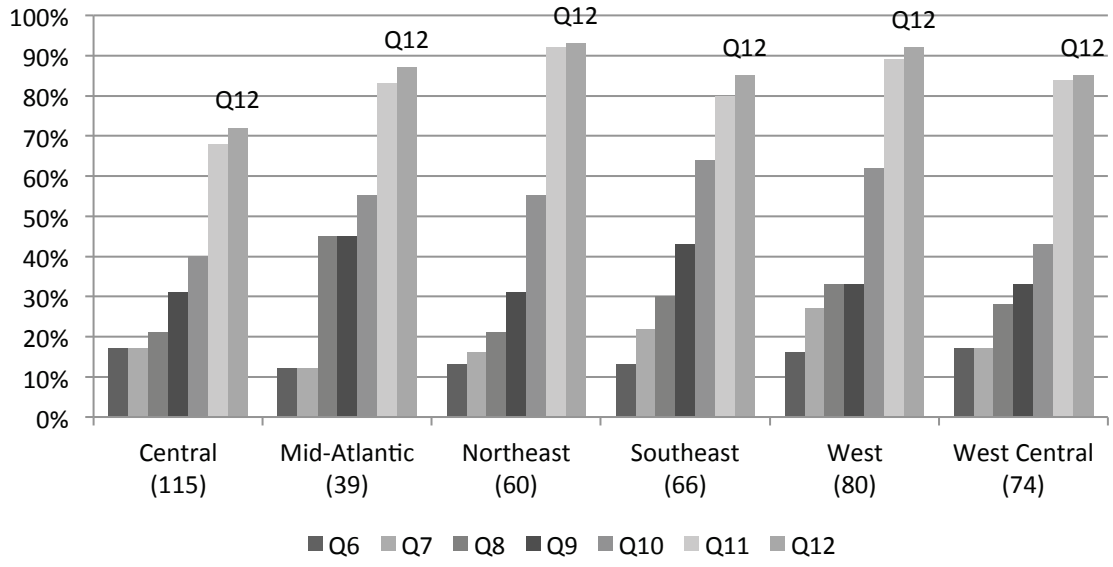
> I have to say that because we have done so much internal report development, we haven't made use of those [Medicare utilization reports], as would an FQHC that doesn't have their own reports. I looked at them and they were interesting, but we already had that information from our internal reports, and with a more-current time frame.

Two other demonstration FQHCs in the follow-up interviews described efforts to identify patients with high utilization profiles from their EHR system or ACO-provided data, but did not mention use of the demonstration feedback reports for this purpose.

Uptake of Feedback Reports

Exhibit A5.5 shows the cumulative percentage of sites that had logged in to view at least one feedback report on the CMS portal that was hosted by Research Triangle International. For most clusters, there was a large increase around Quarter 9, with a steady increase after that, though the increases were very slight from Quarter 11 to Quarter 12. By the end of the demonstration, 72 percent of sites in the Central cluster had accessed the portal, while 93 percent of sites in the Northeast cluster had accessed it.

Exhibit A5.5. Utilization of Feedback Reports over Time, Showing Percentage of Region with Any Portal Log-In to View a Report (n=434)



SOURCE: Research Triangle International, undated.

Participation in Other Initiatives That Redesign Care Delivery or Provide Supplemental Funding to Support PCMH Transformation

This section focuses on the extent to which FQHCs participated in initiatives that redesign care delivery or provide supplementary funding to support PCMH transformation. It includes discussion of both demonstration and comparison sites.

PCMH and Transformation Funding Utilized by Demonstration FQHCs from Sources External to the Demonstration

Three main nondemonstration sources of PCMH funding were used by demonstration sites: HRSA, state Medicaid programs and federal Medicare ACOs, and private managed care plans and commercial insurers.

HRSA Funding

HRSA funding was the most substantial source and consisted of various grant mechanisms. Site respondents described several ways in which they made use of this funding:

> [W]hat was written for was an additional [IT] analyst who was able to help us do [QI] on what we were seeing the providers documenting wrong stuff. This [analyst] keeps track of the core measures [to] know where we're lacking and where we need to improve.

State Medicaid Programs and Federal Medicare Accountable Care Organizations

State Medicaid and federal Medicare ACO programs were reported as additional sources of PCMH funding by programs in only one of the six states in our interview sample (New York), but the amount was considered substantial.

> New York has a reimbursement model through Medicaid that has certainly been an incentive to keep and maintain the [PCMH] certification . . . This is a significant source of revenue for us. When I talk to my friends in California who are doing this, who aren't getting paid, I'm amazed that they're doing it. We get $6 per member, per Medicaid member per month, as a Level 3 medical home. That's a lot of money for us. I mean, it's not a lot of money in terms of our budget, but it's a chunk of money.

The Medicare ACOs were not considered formal PCMH initiatives but were viewed as having similar goals and strategies as PCMH models, particularly related to care management. Site respondents were not able to estimate the magnitude of changes in funding related to participation in their Medicare ACOs, as these initiatives were in relatively early stages.

Private Managed Care Organizations and Commercial Insurers

FQHCs reported a variety of enhanced payment programs by private managed care plans and commercial insurers, including Blue Cross/Blue Shield plans and other managed care plans. These private payer programs were considered to provide relatively modest amounts of

additional funding. One respondent even described how many managed care plans are interested in medical home practices but expect the additional resources necessary to be provided by the FQHC rather than through enhanced payment or funding to support the PCMH model of care:

> Payers were all real interested [in PCMH], but a lot of times they want to use our resources to accomplish their ends. I know it's good for them and it's good for our patients. There are several payers that . . . are always real interested, "Do you have patients in medical home?" because I think they feel like we have the infrastructure to help them to also look good.

PCMH Technical Assistance Utilized by Demonstration FQHCs from Sources External to the Demonstration

Approximately half the demonstration FQHCs in our interview sample reported receiving at least some PCMH TA from nondemonstration sources. The most prominent of these sources were nondemonstration-funded assistance from PCAs and NCQA. Sites in two states reported receiving PCA support that was independent of the APCP demonstration, including a PCMH "learning collaborative" initiated by one PCA prior to and concurrent with the demonstration, and PCMH consultants hired by PCAs with nondemonstration funding to work with sites. In addition, two other sites described paying on their own to send staff to NCQA's generally offered training courses. Other nondemonstration sources of TA mentioned by site respondents included Health Center Control Networks, local FQHC consortiums and peer organizations, and the National Association of Community Health Centers, among others.

A6. Site-Level Variables

The variables that we used to identify the factors associated with NCQA Level 3 PCMH recognition in Chapter Five are listed in this appendix.

Site-, Grantee-, and Area-Level Variable Definitions

Baseline Medical Homeness

- Certified EHR product: Whether an FQHC site has a certified EHR. CMS and the Office of the National Coordinator for Health Information Technology evaluate EHRs based on set standards in order to qualify for the incentive program
- Grantee-level EHR adoption status.

Site-Level Beneficiary Characteristics

These characteristics are described at the level of the FQHC site. Definitions are provided where necessary.

- Number of patients per site (derived from Uniform Data System [UDS])
- Total number of patients per site (in thousands)
- Percentage of patients with Medicaid coverage
- Medicare beneficiaries attributed in year preceding demonstration
- Number of Medicare patients per site (derived from UDS), in thousands
- Percentage of patients with Medicare coverage
- Percentage dual-eligible: An indicator of whether the beneficiary has at least one month of Part B State buy-in during the year preceding the start of the demonstration
- Percentage of patients with commercial insurance
- Percentage of patients with other forms of insurance (includes TRICARE)
- Percentage of patients who have no insurance
- Percentage age <65: The mean percentage of beneficiaries younger than 65 years old as of the start of the demonstration
- Percentage age 65–74: The mean percentage of beneficiaries between the ages of 65 and 74 years old as of the start of the demonstration
- Percentage age 75–84: The mean percentage of beneficiaries between the ages of 75 and 84 years old as of the start of the demonstration

- Percentage age 85 and older: The mean percentage of beneficiaries 85 years of age and older as of the start of the demonstration
- Mean age
- Percentage of patients who are nonwhite
- Percentage white: The mean percentage of beneficiaries who identify as white from CMS enrollment files
- Percentage Asian: The mean percentage of beneficiaries who identify as Asian from CMS enrollment files
- Percentage black: The mean percentage of beneficiaries who identify as black from CMS enrollment files
- Percentage other race: The mean percentage of beneficiaries who identify as another race (besides Asian, black, or white) from CMS enrollment files
- Percentage Hispanic: The mean percentage of beneficiaries who identify as Hispanic from CMS enrollment files
- Percentage disabled: The mean percentage of beneficiaries who are disabled. This is from the Medicare status code of disability in the year preceding the start of the demonstration
- Percentage female: The mean percentage of beneficiaries who are female
- Percentage institutionalized: The mean percentage of beneficiaries at each FQHC who have two or more Skilled Nursing Facility stays
- Mean Hierarchical Condition Category (HCC) score: The mean HCC is estimated using a publicly available algorithm. All beneficiaries are assumed to be community dwelling.

Receipt of External Funding or Participation in Other Demonstrations

- **Affordable Care Act (ACA) Building Capacity grantee.** Indicator of whether a site is affiliated with an FQHC that has received an ACA Building Capacity grant. Funding is provided through the ACA to invest in improvement in public health infrastructure and health centers that provide primary and preventive health services to underserved populations. Participants must be national, nonprofit, public health professional organizations. Participants must benefit state (or local, in cities with populations of at least 1 million people) health departments. The three-year project began in 2012.
- **ACA Immediate Facility Improvement grantee.** Indicator of whether a site is affiliated with an FQHC that has received an ACA Immediate Facility Improvement grant. These grants are made to health centers currently receiving funding through the Health Center Program. Financing will go toward the alteration or renovation costs for health center facilities. The two-year project began in 2012.
- **ACA New Access Point grantee.** Indicator of whether a site is affiliated with an FQHC that has received an ACA New Access Point grant. Funding from the ACA supports community health center programs to establish new health service sites. Health centers

participating in the program include both public and nonprofit groups that cover 42 states, Washington, D.C., and Puerto Rico.

- **American Recovery and Reinvestment Act (ARRA) grantee.** An FQHC site that received funding from ARRA. President Obama signed the ARRA on February 17, 2009.
- **Beacon supplemental funding recipient.** Indicator of whether the grantee received supplemental funding through the Beacon program. FQHC grantees that operated at least one site within a Beacon Community Program service area were eligible for supplemental funding from HRSA to support their participation in the Beacon Community Program. Awards were $100,000 in most cases and were disbursed on September 15, 2011.
- **HCCN grantee (originally funded August 1, 2013).** An FQHC site that received funding from HRSA. HRSA funds HCCN to improve the quality of care through local collaborations of safety-net providers using strategies centered on the use of HIT.
- **Multi-Payer Advanced Primary Care Practice (MAPCP) participant.** A state participating in the MAPCP Demonstration. Eight states were selected to participate in the multipayer demonstration. Coordinated by each state, participating primary care practices received monthly care management fees to care for chronically ill patients. The three-year demonstration aimed to serve 900,000 beneficiaries in 1,200 medical homes. All programs were operational beginning January 1, 2012.
- **Medicaid payments to PCMHs under way.**
- **Participation in other CMS demonstrations tracked by CMS's Master Data Management (MDM) (as of June 2013).** Whether an FQHC site has participated in other CMS demonstrations (e.g., Pioneer, Medicare Shared Savings Plan, and the North Carolina 646 Demonstration).
- **Participation in other CMS demonstrations tracked by MDM (as of July 2014).** Whether an FQHC site has participated in other CMS demonstrations (e.g., Pioneer, Medicare Shared Savings Plan, and the North Carolina 646 Demonstration).
- **Participation in other CMS demonstrations tracked by MDM (as of July 2015).** Whether an FQHC site has participated in other CMS demonstrations (e.g., Pioneer, Medicare Shared Savings Plan, and the North Carolina 646 Demonstration).
- **HRSA Patient-Centered Medical Home Initiative participant.** An FQHC site that participates in the HRSA PCMH Initiative. Health centers can be recognized as PCMHs by achieving benchmarks for patient-centered care that are focused on care coordination and QI (HRSA Health Center Program, undated).
- **PCMH supplemental funding recipient (fiscal year [FY] 2011).** Indicator of whether the grantee received a one-time-only grant of $35,000 to facilitate PCMH transformation. These funds were designed to help enhance access to care, patient flow redesign, care planning, support for team-based models of service delivery, and necessary systems upgrades.

- **PCMH supplemental funding recipient (FY 2012).** Indicator of whether the grantee received a grant of $55,000 to facilitate PCMH transformation while implementing QI programs focusing on cervical cancer.
- **Receiving PCMH payments from one or more plans.** Whether an FQHC site is receiving PCMH incentive payments from one or more APCP–related plans at baseline.
- **Payments linked to PCMH recognition standards.** PCMH recognition is based on scoring according to six standards (enhancing access and continuity, identifying and managing patient populations, planning and managing care, providing self-care support and community resources, tracking and coordinating care, and measuring and improving performance), each of which is composed of multiple elements. Sites achieve Level 1, 2, or 3 recognition based on their total number of points scored across elements.
- **Safety Net Medical Home (SNMH) Initiative Participant.** Indicator of whether an FQHC site participated in the SNMH Initiative, a five-year demonstration effort to transform safety net sites into PCMHs (Safety Net Medical Home Initiative, undated).

Site-Level Structural Characteristics

These characteristics are described at the level of the FQHC site. Definitions are provided where necessary.

- Years in operation (ten-year categories): This is calculated as the difference between the site's opening date and the start of the demonstration (November 1, 2011).
- Years in operation: This is calculated as the difference between the site's opening date and the start of the demonstration (November 1, 2011).
- Total hours of operation per week
- Total off-peak hours of operation per week (<8am, >5pm, weekends)
- Number of service delivery sites (three categories): The number of service delivery sites operated by the site's grantee organization.
- Number of sites per grantee: Total number of service delivery sites associated with the grantee. Note the count includes sites that have a narrow focus (e.g., mental health, dental care, mobile vans).
- Total revenue per site (in millions of U.S. dollars)
- Grant revenue per site (in millions of U.S. dollars)
- Total patient revenue per site
- FQHC led by physician or nurse
- Number of physicians per site
- Number of full-time equivalent (FTE) physicians per site
- Number of clinicians per site (nurse practitioner [NP] or physician's assistant [PA])
- Number of FTEs per site (NP or PA)

- Number of clinicians per site (physicians, NPs, and PAs)
- Number of FTEs among medical doctors [MDs]/NPs/PAs
- Primary care physicians: This number is based on National Plan & Provider Enumeration System (NPPES) specialty taxonomy codes; see memo entitled: Specialty Categories for Comp Group Selection
- Number of specialists: This number is based on NPPES specialty taxonomy codes; see memo entitled: Specialty Categories for Comp Group Selection
- Number of behavioral health/social service providers: This number is based on NPPES specialty taxonomy codes (Timbie, undated)
- Number of dental providers: This number is based on NPPES specialty taxonomy codes (Timbie, undated)
- Number of podiatrists: This number is based on NPPES specialty taxonomy codes (Timbie, undated)
- Number of vision providers: This number is based on NPPES specialty taxonomy codes (Timbie, undated)
- Number of midlevel providers: This number is based on NPPES specialty taxonomy codes (Timbie, undated)
- Number of other providers: This number is based on NPPES specialty taxonomy codes (Timbie, undated)
- Ambulatory care accreditation: Recognition from HRSA that the grantee received "ambulatory care accreditation" from either the Joint Commission or AAAHC; "ambulatory health care accreditation evaluates health centers on the safety and quality of patient care that they provide" (HRSA Health Center Program, undated)
- Admitting privileges with local hospitals: Whether an FQHC site has admitting privileges with local hospitals
- Tribal Health Center or Urban Indian Health Center: Whether the site is a Tribal Health Center or an Urban Indian Health Center; these sites are operated by tribes, tribal organizations, or by urban Indian organizations through contracts or compacts with the Indian Health Service.

Primary Care Association Region

- PCA Region: The PCA region that oversees the delivery of TA to the site.

Neighborhood Characteristics

- Rural-urban continuum code (trichotomized)
- Urbanicity: Whether an FQHC site is located in an urban or rural area.

Census-Based Measures

The following measures are based on the census tract in which the FQHC site operates.

- Total population in census tract
- Percentage American Indian population in census tract
- Percentage white population in census tract
- Percentage Asian population in census tract
- Percentage black population in census tract
- Percentage other race in census tract
- Percentage Hispanic population in census tract
- Percentage Spanish preferring and limited English proficiency in census tract
- Percentage foreign-born population in census tract
- Percentage noncitizen in census tract
- Percentage greater than a bachelor's degree in census tract
- Percentage household poverty in census tract: The percentage of households below the federal poverty line in the census tract in which the FQHC site operates
- Health Professional Shortage Area (HPSA) designation: HPSAs are geographic areas, population groups, or facilities that are recognized by HRSA as having shortages of health professionals, including primary care, dental, or mental health providers (HRSA, undated-b)
- Medically Underserved Area designation: Medically Underserved Areas are areas that HRSA recognizes as having too few primary care providers, high poverty, high infant mortality, or a high elderly population (HRSA, undated-a).

Area-Level PCMH Activity

- Medicaid/Children's Health Insurance (CHIP) and Multipayer PCMH activity (trichotomized)
- Medicaid Health Home Initiatives: The Medicaid Health Home Initiatives that have been implemented in the state in which the FQHC operates. The Medicaid State Plan Option, established through Section 2703 of the ACA, allows states to create health homes for Medicaid beneficiaries with chronic conditions (CMS, undated).
- State-level PCMH activity
- State-level Multipayer PCMH Initiative.

Distribution of Variables

Exhibit A6.1 shows the distribution of values for variables used in the regression described in Chapter Four. Italicized variables were used in the report.

Exhibit A6.1. Site-, Grantee-, and Area-Level Variables

Variables	Values	N/Mean	%/Standard Deviation (SD)	Funding-related?	First Year Noted [a]	Level
Baseline "Medical Homeness"						
Certified EHR product (N/%) [c]	No Yes	113 538	8.5 40.5	No		Site
Grantee-level EHR adoption status (N/%)	All sites and for all providers At some sites or for some providers None in use	781 260 230	58.7 19.5 17.3	No		Grantee
Site-Level Beneficiary Characteristics						
Number of patients per site (derived from UDS) (mean/SD)		3,248.5	2,256.6	Yes—Internal		Site
Total number of patients per site (in thousands) (mean/SD) [c]		6.7	5.9	No		Site
Percentage of patients with Medicaid coverage (mean/SD) [c]		16.9	20.3	Yes		Site
Medicare beneficiaries attributed in year preceding demo (mean/SD)		320.8	293.0	Yes		Site
Number of Medicare patients per site (derived from UDS), in thousands (mean/SD)		287.1	220.4	No		Site
Percentage of patients with Medicare coverage (mean/SD) [c]		7.3	10.2	Yes		Site
Percentage of patients who are dual-eligible (mean/SD)		48.5	18.0	Yes		Site
Percentage of patients with commercial insurance (mean/SD) [c]		8.8	12.8	No		Site

Variables	Values	N/Mean	%/Standard Deviation (SD)	Funding-related?	First Year Noted [a]	Level
Percentage of patients with other forms of insurance (includes TRICARE) (mean/SD) [c]		2.2	6.2	Yes		Site
Percentage of patients who have no insurance (mean/SD) [c]		13.7	17.9	Yes		Site
Percentage of patients who are age <65 (mean/SD)		46.1	17.4	No	2011	Site
Percentage of patients who are age 65–74 (mean/SD)		34.7	9.5	No	2011	Site
Percentage of patients who are age 75–84 (mean/SD)		14.8	7.8	No	2011	Site
Percentage of patients who are age 85 and older (mean/SD)		4.5	4.0	No	2011	Site
Mean age (mean/SD)		62.4	5.5	No		Site
Percentage of patients who are white (mean/SD)		67.1	29.2	No		Site
Percentage of patients who are nonwhite (mean/SD) **		42.7	33.8	No		Site
Percentage of patients who are Asian (mean/SD)		2.4	9.1	No		Site
Percentage of patients who are black (mean/SD)		20.2	27.8	No		Site
Percentage of patients categorized as other race (mean/SD)		2.8	7.4	No		Site
Percentage of patients who are Hispanic (mean/SD)		7.1	11.7	No		Site
Percentage of patients who are disabled (mean/SD)		52.5	17.1	No	2010	Site
Percentage of patients who are female (mean/SD)		55.9	7.9	No		Site

Variables	Values	N/Mean	%/Standard Deviation (SD)	Funding-related?	First Year Noted [a]	Level
Percentage of patients who are institutionalized (mean/SD)		2.5	2.4	No		Site
Mean HCC score (mean/SD)		1.1	0.2	No		Site
Receipt of External Funding or Participation in Other Demonstrations						
ACA Grantee (composite of three measures below)						
ACA Building Capacity Grantee (N/%)	No Yes	1,113 217	83.7 16.3	Yes–External		Grantee
ACA Immediate Facility Improvement Grantee (N/%)	No Yes	1,004 326	75.5 24.5	Yes–External		Grantee
ACA New Access Point grantee (N/%)	No Yes	1,137 193	85.5 14.5	Yes–External	2012	Grantee
ARRA Grantee (N/%)	No Yes	423 907	31.8 68.2	Yes–External	2009	Grantee
Beacon supplemental funding recipient (N/%)	No Yes	1,211 119	91.1 8.9	Yes–External	2011	Site
HCCN grantee (N/%)	No Yes	587 743	44.1 55.9	Yes–External	2013	Grantee
MAPCP participant (N/%)	No Yes	1,330 —	100.0 —		2012	Site
Medicaid payments to PCMHs under way (N/%)	No payments to medical homes Medicaid payments to medical homes under way	590 740	44.4 55.6	Yes–External		
Participation in Other CMS Demo (N/%)	No Yes	1,104 226	83.0 17.0	No	2013 [b]	Site
Participation in Other CMS Demo (N/%)	No Yes	1,039 291	78.1 21.9	No	2014 [b]	Site
Participation in Other CMS Demo (N/%)	No Yes	1,039 291	78.1 21.9	No	2015 [b]	Site
HRSA PCMH Initiative participant (N/%)	No Yes	755 575	56.8 43.2			Site
PCMH supplemental funding recipient (N/%)	No Yes	299 1,031	22.5 77.5	Yes	FY 2011	

Variables	Values	N/Mean	%/Standard Deviation (SD)	Funding-related?	First Year Noted [a]	Level
PCMH supplemental funding recipient (N/%)	No Yes	400 930	30.1 69.9	Yes	FY 2012	
Receiving PCMH payments from one or more plans (N/%)	No Yes	566 85	42.6 6.4	Yes		Site
Payments linked to PCMH recognition standards (N/%)	No Yes	669 661	50.3 49.7	Yes		Site
SNMH Initiative Participant (N/%)	No Yes	1,309 21	98.4 1.6		2008	Site
Site-Level Structural Characteristics						
Years in operation (N/%)	1–10 years 10–20 years 20–30 years 30–40 years 40+ years	474 342 156 248 79	35.6 25.7 11.7 18.6 5.9	No	2011	Site
Years in operation (mean/SD)		18.5	13.3	No	2011	Site
Total hours of operation per week (mean/SD)		50.1	7.7	No		Site
Total off-peak hours of operation per week (<8am, >5pm, weekends) (mean/SD)		4.9	5.2	No		Site
Number of service delivery sites (N/%)	1 site 2–10 sites 11+ sites	73 820 437	5.5 61.7 32.9	No		Grantee
Number of sites per grantee (mean/SD)		10.3	10.1	No		Grantee
Total revenue per site (in millions) (mean/SD)		2.1	1.8	Yes–Internal		Site
Grant revenue per site (in millions) (mean/SD)		0.8	0.8	Yes–External		Site
Total patient revenue per site (in millions) (mean/SD)		1.3	1.2	Yes–Internal		Site
FQHC led by physician or nurse (N/%)[c]	Nurse Physician	34 616	2.6 46.3	No		Site
Number of physicians per site (mean/SD) [c]		4.3	4.2	No		Site

Variables	Values	N/Mean	%/Standard Deviation (SD)	Funding-related?	First Year Noted [a]	Level
Number of physician FTEs per site (mean/SD) [c]		3.3	3.3	No		Site
Number of clinicians per site (NP or PA) (mean/SD) [c]		2.7	2.7	No		Site
Number of FTEs per site (NP or PA) (mean/SD) [c]		2.1	2.1	No		Site
Number of clinicians per site (physicians, NPs, and PAs) (mean/SD)		7.1	6.0	No		Site
Number of FTEs among MD/NP/PA (mean/SD)		5.4	4.6			Site
Primary care physicians (mean/SD)		5.4	5.3	No		Site
*Number of specialists (*mean/SD)		0.8	2.1	No		Site
Number of behavioral health/social service providers (mean/SD)		0.3	0.9	No		Site
Number of dental providers (mean/SD)		0.0	0.2	No		Site
Number of podiatrists (mean/SD)		0.2	0.5	No		Site
Number of vision providers (mean/SD)		0.1	0.5	No		Site
Number of mid-level providers (mean/SD)		2.4	2.9	No		Site
Number of other providers (mean/SD)		0.3	0.9	No		Site
Ambulatory care accreditation (N/%)	No Yes	929 401	69.8 30.2	No		Site
Admitting privileges with local hospitals (N/%) [c]	No Yes	231 420	17.4 31.6	No		Site
Tribal Health Center or Urban Indian Health Center (N/%)	No Yes	1,319 11	99.2 0.8	No		Site
PCA Region						

Variables	Values	N/Mean	%/Standard Deviation (SD)	Funding-related?	First Year Noted [a]	Level
PCA Region (N/%)	Central	294	22.1	No	NA	Area
	Mid-Atlantic	171	12.9			
	Northeast	139	10.5			
	Southeast	257	19.3			
	West	214	16.1			
	West-Central	255	19.2			
Neighborhood Characteristics						
Rural-Urban Continuum Code (trichotomized) (N/%)	Metro	869	65.3	No	NA	Area
	Nonmetro–urban	367	27.6			
	Nonmetro–rural	94	7.1			
Urbanicity (N/%)	Urban	481	36.2	No	NA	Area
	Rural	849	63.8			
Census-Based Measures						
Total population in census tract (mean/SD)		4,823.4	3,010.7	No	2005–2009	Area
Percentage American Indian population in census tract (mean/SD)		1.7	6.9	No	2005–2009	Area
Percentage white population in census tract (mean/SD)		68.1	28.3	No	2005–2009	Area
Percentage Asian population in census tract (mean/SD)		3.3	8.7	No	2005–2009	Area
Percentage black population in census tract (mean/SD)		17.5	26.0	No	2005–2009	Area
Percentage other race in census tract (mean/SD)		9.5	11.9	No	2005–2009	Area
Percentage Hispanic population in census tract (mean/SD)		18.1	25.4	No	2005–2009	Area
Percentage Spanish preferring & limited English proficiency in census tract (mean/SD)		0.1	0.1	No	2005–2009	Area
Percentage foreign born population in census tract (mean/SD)		10.7	13.7	No	2005–2009	Area
Percentage noncitizen in census tract (mean/SD)		7.2	9.8	No	2005–2009	Area

Variables	Values	N/Mean	%/Standard Deviation (SD)	Funding-related?	First Year Noted [a]	Level
Percentage with greater than a bachelor's degree in census tract (mean/SD)		16.7	12.0	No	2005–2009	Area
Percentage household poverty in census tract (mean/SD)		21.4	11.5	Yes	2005–2009	Area
Health Professional Shortage Area designation (N/%)	AREA POP SCTY None	166 452 173 539	12.5 34.0 13.0 40.5	No		Site
Area-Level PCMH Activity						
Medicaid/CHIP and Multipayer PCMH activity (N/%)	No Medicaid/CHIP or multipayer payments to medical homes under way Medicaid/CHIP-only payments to medical homes under way Multipayer payments to medical homes under way	590 275 465	44.4 20.7 35.0	Yes–External		
Medicaid Health Home Initiatives (N/%)	No activity State has a planning grant State has an approved state plan amendment State has a planning grant AND an approved state plan amendment	620 436 155 119	46.6 32.8 11.7 8.9	No	2010	
State-level PCMH Activity (N/%)	No activity Medical home activity but no payments to medical homes Payments to medical homes under way	144 446 740	10.8 33.5 55.6	Yes–External		

Variables	Values	N/Mean	%/Standard Deviation (SD)	Funding-related?	First Year Noted [a]	Level
Medically Underserved Area designation (N/%)	GOV	88	6.6	No		Area
	MUA	785	59.0			
	MUP	151	11.4			
	None	306	23.0			
State-level Multipayer PCMH Initiatives (N/%)	No Activity	806	60.6			
	Multipayer planning activity under way	59	4.4			

SOURCE: RAND analysis of data provided by American Community Survey (ACS), AIR, Claims, Claims (EBD), CMS, CMS (Demo application_, CMS (MDM), HRSA, HRSA (Form 5B), and HRSA (UDS).
NOTE: *Italicized text* represents a variable used in the report.
[a] First year noted is either (1) first date of the program or (2) first date that data were available to RAND.
[b] First year noted is first date that data were available to RAND.
[c] The variable is from the application data.

A7. Supplementary Analyses of the Effects of Site-Level Characteristics and Interventions on NCQA Recognition Status

This chapter provides additional data concerning the effects of site-level characteristics and demonstration components, as well as other forms of PCMH-related support on change in practice structure and NCQA recognition, as described in Chapter Five.

Prevalence of Baseline Site-Level Characteristics for All, Demonstration, and Comparison Federally Qualified Health Center Sites

Analyses needed to control for important differences in site- and area-level characteristics between demonstration and comparison FQHCs. At a structural level, demonstration FQHCs were more likely than comparison FQHCs to have more than one service delivery site (98 percent vs. 92 percent) and ambulatory care accreditation (38 percent vs. 26 percent). Demonstration FQHCs were also more likely to be recipients of other types of external funding and participate in other demonstrations (ACA Building Capacity Grantee, ACA immediate Facility Improvement Grantee, HRSA PCMH participant, PCMH Supplemental Funding recipient). Overall, demonstration and comparison FQHCs were similar with respect to the demographic characteristics of their patient populations and other contextual measures—e.g., region, percentage of household poverty in the census tract in which the FQHC operates (see Exhibit A7.1).

Exhibit A7.1. Prevalence of Baseline Site-Level Characteristics for All, Demonstration, and Comparison FQHC Sites

Site-Level Characteristics at Baseline	All Sites (n=1,330)	Demonstration Sites (n=503)	Comparison Sites (n=827)
Site-Level Structural Characteristics			
Years in operation: 1–10 years[§], n (%)	474 (35.6)	169 (33.6)	305 (36.9)
10–20 years[§], n (%)	342 (25.7)	142 (28.2)	200 (24.2)
20–30 years[§], n (%)	156 (11.7)	59 (11.7)	97 (11.7)
30–40 years[§], n (%)	248 (18.6)	93 (18.5)	155 (18.7)
40+ years[§], n (%)	79 (5.9)	27 (5.4)	52 (6.3)
Number of service delivery sites: 1 site***, n (%)	73 (5.5)	11 (2.2)	62 (7.5)
Number of service delivery sites: 2–10 sites***, n (%)	820 (61.7)	274 (54.5)	546 (66.0)
Number of service delivery sites: 11+ sites***, n (%)	437 (32.9)	218 (43.3)	219 (26.5)
Total revenue per site (in millions)[§], mean (standard deviation [SD])	2.1 (1.8)	2.1 (1.6)	2.1 (1.8)
Number of primary care physicians[§], mean (SD)	5.4 (5.3)	5.5 (4.9)	5.4 (5.6)
Number of specialists[§], mean (SD)	0.8 (2.1)	0.8 (1.8)	0.8 (2.2)
Ambulatory care accreditation***, n (%)	401 (30.2)	190 (37.8)	211 (25.5)
Site-Level Beneficiary Characteristics			
Mean age[§], mean (SD)	62.4 (5.5)	62.3 (5.2)	62.5 (5.6)
Mean HCC score[§], mean (SD)	1.1 (0.2)	1.2 (0.1)	1.1 (0.2)
Percent disabled, mean (SD)	52.5 (17.1)	53.2 (16.8)	52.1 (17.2)
Percent dual-eligible[§†], mean (SD)	48.5 (18.0)	49.6 (18.1)	47.8 (17.9)
Medicare beneficiaries attributed in year preceding demonstration[§†], mean (SD)	320.8 (293.0)	302.9 (216.6)	331.6 (330.4)
Receipt of External Funding or Participation in Other Demonstrations			
HCCN grantee, n (%)	743 (55.9)	286 (56.9)	457 (55.3)
ACA Building Capacity Grantee**, n (%)	217 (16.3)	100 (19.9)	117 (14.1)
ACA New Access Point Grantee, n (%)	193 (14.5)	71 (14.1)	122 (14.8)

Site-Level Characteristics at Baseline	All Sites (n=1,330)	Demonstration Sites (n=503)	Comparison Sites (n=827)
ACA Immediate Facility Improve Grantee***, n (%)	326 (24.5)	182 (36.2)	144 (17.4)
HRSA PCMH Initiative participant***, n (%)	575 (43.2)	292 (58.1)	28 (34.2)
PCMH supplemental funding recipient***, n (%)	1,031 (77.5)	471 (93.6)	560 (67.7)
Participation in other CMS demo *, n (%)	226 (17.0)	101 (20.1)	125 (15.1)
PCA Region			
Central**, n (%)	294 (22.1)	127 (25.2)	167 (20.2)
Mid-Atlantic**, n (%)	171 (12.9)	61 (12.1)	110 (13.3)
Northeast**, n (%)	139 (10.5)	65 (12.9)	74 (8.9)
Southeast**, n (%)	257 (19.3)	76 (15.1)	181 (21.9)
West**, n (%)	214 (16.1)	85 (16.9)	129 (15.6)
West-Central**, n (%)	255 (19.2)	89 (17.7)	166 (20.1)
Neighborhood Characteristics			
Rural-urban continuum: metro*, n (%)	869 (65.3)	347 (69.0)	522 (63.1)
Nonmetro-urban*, n (%)	367 (27.6)	130 (25.8)	237 (28.7)
Nonmetro-rural*, n (%)	94 (7.1)	26 (5.2)	68 (8.2)
Percentage of households in poverty, mean (SD)	21.4 (11.5)	20.8 (11.3)	21.7 (11.5)

SOURCE: RAND analysis of data provided by ACS, AIR, Claims, Claims (EBD), CMS, CMS (Demo application_, CMS (MDM), HRSA, HRSA (Form 5B), and HRSA (UDS).
† 0.05<p≤0.10; * p<0.05; ** p<0.01; *** p<0.001.
§ Missing data were imputed using the mean value for each characteristic.

Bivariate Relationships Between Site-Level Characteristics and Medical Home Recognition

As described in Section 6.2, overall, 33 percent (n=445) of all 1,330 FQHCs (503 demonstration and 827 comparison sites) achieved NCQA Level 3 recognition, and 44 percent (n=583) achieved Level 3–equivalent recognition (defined as PCMH recognition from NCQA Level 3, Joint Commission [JC], AAAHC, or states). Demonstration sites were significantly more likely than comparison sites to achieve NCQA Level 3 (70 percent vs. 11 percent) and Level 3–equivalent recognition (76 percent vs. 24 percent).

Site-level characteristics were associated with both NCQA Level 3 and Level 3–equivalent recognition. (See Exhibit A7.2.)

Exhibit A7.2. Bivariate Relationships Between Site-Level Characteristics and Medical Home Recognition

Site-Level Characteristics at Baseline	All Sites (n=1,330)	Any NCQA Level (1, 2, 3) (n=599)	NCQA Level 3 Recognition (n=445)	Level 3–Equivalent Recognition (n=583)
Demonstration, n (%)	503 (37.8)	395*** (65.94)	351*** (78.9)	382*** (65.5)
Comparison, n (%)	827 (62.2)	204*** (34.06)	94 (21.1)	201 (34.5)
Site-Level Structural Characteristics				
Years in operation: 1–10 years[§], n (%)	474 (35.6)	212 (35.39)	156 (35.1)	201 (34.5)
10–20 years[§], n (%)	342 (25.7)	146 (24.37)	115 (25.8)	155 (26.6)
20–30 years[§], n (%)	156 (11.7)	73 (12.19)	58 (13.0)	74 (12.7)
30–40 years[§], n (%)	248 (18.6)	115 (19.20)	72 (16.2)	102 (17.5)
40+ years[§], n (%)	79 (5.9)	33 (5.51)	29 (6.5)	35 (6.0)
Number of service delivery sites: 1 site, n (%)	73 (5.5)	32 (5.51)	16*** (3.6)	25*** (4.3)
Number of service delivery sites: 2–10 sites, n (%)	820 (61.7)	355 (59.27)	248*** (55.7)	307*** (52.7)
Number of service delivery sites: 11+ sites, n (%)	437 (32.9)	212 (35.39)	181*** (40.7)	251*** (43.1)
Total revenue per site (in millions) [§], mean (SD)	2.1 (1.8)	2.35*** (1.96)	2.4 (2.0)	2.4 (1.9)
Number of primary care physicians[§], mean (SD)	5.4 (5.3)	5.80* (5.45)	6.0** (5.7)	6.2*** (5.7)
Number of specialists[§], mean (SD)	0.8 (2.1)	0.79 (2.26)	0.9 (2.0)	0.9 (2.1)
Grantee-level EHR adoption status: all sites for all providers	781 (58.7)	414*** (69.12)	319*** (71.7)	373*** (64.0)
Grantee-level EHR adoption status: some sites or for some providers	260 (19.5)	103*** (17.20)	77*** (17.3)	122*** (20.9)
Grantee-level EHR adoption status: none in use	230 (17.3)	73*** (12.19)	42*** (9.4)	81*** (13.9)
Ambulatory care accreditation, n (%)	401 (30.2)	194 (32.39)	156 (35.1)	262 (44.9)
Site-Level Beneficiary Characteristics				
Mean age[§], mean (SD)	62.4 (5.5)	62.21 (5.31)	62.0[†] (5.3)	62.1[†] (5.3)
Mean HCC score[§], mean (SD)	1.1 (0.2)	1.15* (0.14)	1.2** (0.1)	1.1 (0.1)
Percent disabled, mean (SD)	52.5 (17.1)	53.33 (16.67)	54.0* (16.4)	53.6* (16.4)

Site-Level Characteristics at Baseline	All Sites (n=1,330)	Any NCQA Level (1, 2, 3) (n=599)	NCQA Level 3 Recognition (n=445)	Level 3–Equivalent Recognition (n=583)
Percent dual-eligible[§], mean (SD)	48.5 (18.0)	50.03** (17.77)	50.7** (17.3)	50.3** (17.4)
Medicare beneficiaries attributed in year preceding demonstration[§], mean (SD)	320.8 (293.0)	338.67* (271.71)	336.9 (267.7)	338.3[†] (301.5)
Receipt of External Funding or Participation in Other Demonstrations				
HCCN grantee (funded 8/1/2013), n (%)	743 (55.9)	368*** (61.44)	288 (64.7)	366 (62.8)
ACA Building Capacity Grantee, n (%)	217 (16.3)	128*** (21.37)	110*** (24.7)	134*** (23.0)
ACA New Access Point Grantee, n (%)	193 (14.5)	103* (17.20)	86*** (19.3)	111*** (19.0)
ACA Immediate Facility Improve Grantee, n (%)	326 (24.5)	190*** (31.72)	156*** (35.1)	200*** (34.3)
HRSA PCMH Initiative participant, n (%)	575 (43.2)	382*** (63.77)	278*** (62.5)	316*** (54.2)
PCMH supplemental funding recipient (%)	1,031 (77.5)	541*** (90.32)	441*** (92.4)	534*** (91.6)
Participation in other CMS demo, n (%)	226 (17.0)	120** (20.03)	91* (20.4)	117** (20.1)
PCA Region				
Central, n (%)	294 (22.1)	149*** (24.87)	124*** (27.9)	148*** (25.4)
Mid-Atlantic, n (%)	171 (12.9)	56*** (9.35)	28*** (6.3)	36*** (6.2)
Northeast, n (%)	139 (10.5)	95*** (15.86)	77*** (17.3)	85*** (14.6)
Southeast, n (%)	257 (19.3)	80*** (13.36)	56*** (12.6)	87*** (14.9)
West, n (%)	214 (16.1)	97*** (16.19)	69*** (15.5)	100*** (17.2)
West-Central, n (%)	255 (19.2)	122*** (20.37)	91*** (20.4)	127*** (21.8)
Neighborhood Characteristics				
Rural-urban continuum: metro, n (%)	869 (65.3)	87 (14.52)	307 (69.0)	410** (70.3)
Nonmetro-urban, n (%)	367 (27.6)	20.53* (11.13)	113 (25.4)	140** (24.0)
Nonmetro-rural, n (%)	94 (7.1)	87 (14.52)	25 (5.6)	33** (5.7)
Percentage of households in poverty, mean (SD)	21.4 (11.5)	20.53[†] (11.13)	20.6[†] (11.4)	18.1*** (13.6)

SOURCE: RAND analysis of data provided by ACS, AIR, Claims, Claims (EBD), CMS, CMS (Demo application_, CMS (MDM), HRSA, HRSA (Form 5B), and

HRSA (UDS). Recognition data from NCQA, 2014 (compiled by Truven) for demonstration sites (n=503) and HRSA, 2014, for comparison sites approaching the end of the demonstration's 12th quarter.

NOTES: Columns 3–5 reflect predicted medical home recognition at demonstration end, with three different measures of medical home recognition in combined demonstration and comparison site FQHC cohorts. Among 1,330 demonstration and comparison FQHCs, 445 (33.5 percent) sites achieved NCQA Level 3 recognition, 599 (45.0 percent) reached any NCQA (1,2,3) level, and 583 (43.8 percent) gained Level 3–equivalent recognition defined as PCMH recognition from AAAHC, JC, States, or NCQA (Level 3 only).

† $0.05<p\leq0.10$; * $p<0.05$; ** $p<0.01$; *** $p<0.001$.

§Missing data were imputed using the mean value for each characteristic.

Multivariable Relationships Between Site-Level Characteristics and Medical Home Recognition Stratified by Demonstration and Comparison FQHCs

The association between several baseline site-level characteristics and NCQA Level 3 recognition varied notably by demonstration status in several situations (see Exhibits A7.3–A7.6). A higher number of service delivery sites and total revenue were both associated with increased odds of NCQA Level 3 recognition among comparison sites but not among demonstration sites. An increasing mean site-level HCC score was associated with NCQA Level 3 recognition among demonstration but not comparison sites. An increased number of specialists was associated with increased likelihood of NCQA Level 3 recognition among demonstration sites (odds ratio [OR]=1.24), but the opposite association was found among comparison sites (OR=0.74). Ambulatory care accreditation was associated with NCQA Level 3 recognition but only among demonstration sites. Receipt of external funding continued to be an important predictor of NCQA Level 3 recognition in both demonstration and comparison FQHCs.

Exhibit A7.3. Multivariable Relationships Between Site-Level Characteristics and Medical Home Recognition for Three Different Measures of Medical Home Recognition for 1,330 Demonstration or Comparison FQHCs

	NCQA Level 3 Recognition (N=1,330)		Any NCQA Level (1,2,3) Recognition (N=1,330)		Level 3–Alternate Recognition (N=1,330)	
Site-Level Characteristics at Baseline	**OR (Standard Error [SE])**	**p-value**	**OR (SE)**	**p-value**	**OR (SE)**	**p-value**
Interventions to enhance APCPs						
Demonstration interventions						
Participation in the FQHC APCP Demo	**20.33*** (3.65)**	<0.001	**11.07*** (1.81)**	<0.001	**9.63*** (1.53)**	<0.001
Nondemonstration interventions						
External funding						
ACA funding[a]	**1.86*** (0.32)**	<0.001	**1.68** (0.27)**	0.001	1.22 (0.19)	0.198
HRSA PCMH Initiative participant	**2.02*** (0.34)**	<0.001	**3.70*** (0.56)**	<0.001	1.17 (0.18)	0.301
PCMH supplemental funding recipient	1.45 (0.38)	0.147	**1.54* (0.31)**	0.035	**2.52*** (0.53)**	<0.001
Site characteristics						
Years in operation						
1–30 years[b]	*[reference]*					
30+ years[b]	0.87 (0.17)	0.465	1.07 (0.18)	0.693	0.87 (0.15)	0.425

Site-Level Characteristics at Baseline	NCQA Level 3 Recognition (N=1,330)		Any NCQA Level (1,2,3) Recognition (N=1,330)		Level 3–Alternate Recognition (N=1,330)	
	OR (Standard Error [SE])	p-value	OR (SE)	p-value	OR (SE)	p-value
Number of service delivery sites						
1 site	*[reference]*					
2–10 sites	1.54 (0.68)	0.323	0.80 (0.26)	0.487	0.72 (0.25)	0.348
11+ sites	2.30† (1.09)	0.079	0.75 (0.27)	0.425	1.27 (0.49)	0.525
Total revenue per site (in millions)[b]	**1.23*** (0.07)**	<0.001	**1.12* (0.06)**	0.029	**1.14* (0.06)**	0.014
Number of primary care physicians[b]	1.01 (0.02)	0.598	1.01 (0.02)	0.692	1.03 (0.02)	0.129
Number of specialists[b]	0.96 (0.04)	0.382	0.92† (0.04)	0.063	0.99 (0.04)	0.867
Beneficiary characteristics						
Mean age[b]	1.04 (0.05)	0.464	1.04 (0.05)	0.429	1.05 (0.05)	0.213
Mean HCC score[b]	2.54† (1.39)	0.088	1.30 (0.67)	0.606	0.73 (0.37)	0.540
Percent disabled	1.01 (0.02)	0.512	1.01 (0.01)	0.547	1.02 (0.01)	0.183
Percent dual-eligible[b]	1.01 (0.01)	0.131	**1.02** (0.01)**	0.009	1.00 (0.01)	0.849
Medicare beneficiaries attributed in year preceding demonstration[b]	1.00 (0.00)	0.254	1.00 (0.00)	0.107	1.00 (0.00)	0.235

Site-Level Characteristics at Baseline	NCQA Level 3 Recognition (N=1,330) OR (Standard Error [SE])	p-value	Any NCQA Level (1,2,3) Recognition (N=1,330) OR (SE)	p-value	Level 3–Alternate Recognition (N=1,330) OR (SE)	p-value
Geographic characteristics						
PCA regions						
Central	*[reference]*					
Mid-Atlantic	**0.26*** (0.08)**	<0.001	0.72 (0.19)	0.203	**0.20*** (0.06)**	<0.001
Northeast	**2.05* (0.61)**	0.016	**2.82*** (0.81)**	<0.001	1.42 (0.39)	0.191
Southeast	**0.58* (0.16)**	0.048	0.80 (0.20)	0.365	0.80 (0.19)	0.357
West	**0.39** (0.12)**	0.002	0.62 (0.17)	0.090	0.59† (0.16)	0.054
West-Central	0.81 (0.21)	0.412	1.13 (0.26)	0.597	1.12 (0.26)	0.615
Rural-urban continuum						
Metro	*[reference]*					
Nonmetro–urban	0.85 (0.19)	0.473	0.93 (0.19)	0.711	0.82 (0.17)	0.325
Nonmetro–rural	1.14 (0.32)	0.642	1.18 (0.29)	0.483	1.07 (0.26)	0.779
Percentage of households in poverty	**0.98** (0.01)**	0.007	**0.98** (0.01)**	0.002	0.99† (0.01)	0.053

Site-Level Characteristics at Baseline	NCQA Level 3 Recognition (N=1,330)		Any NCQA Level (1,2,3) Recognition (N=1,330)		Level 3–Alternate Recognition (N=1,330)	
	OR (Standard Error [SE])	p-value	OR (SE)	p-value	OR (SE)	p-value
PCMH cultural readiness						
Ambulatory care accreditation	**0.61**** **(0.11)**	0.008	**0.60**** **(0.10)**	0.004	**2.85***** **(0.47)**	<0.001
HCCN grantee	**2.08***** **(0.36)**	<0.001	**1.57**** **(0.24)**	0.003	**1.62**** **(0.25)**	0.002
Participation in other CMS demonstration	1.01 (0.22)	0.953	0.96 (0.20)	0.837	1.12 (0.23)	0.597

SOURCE: Baseline characteristics—compiled by Truven, sent to RAND 2/29/2012; NCQA recognition—NCQA 2014 compiled by Truven; analyses by RAND.
NOTES: Among 1,330 demonstration and comparison FQHCs, 445 (33.5 percent) sites achieved NCQA Level 3 recognition, 599 (45.0 percent) reached any NCQA (1,2,3) level, and 583 (43.8 percent) gained Level 3–alternate recognition defined as PCMH recognition from Accreditation Association for Ambulatory Health Care (AAAHC), Joint Commission, states, or NCQA (Level 3 only) by the end of the demonstration.
† p<0.10; * p<0.05; ** p<0.01; *** p<0.001**.** Bold indicates statistically significant results (p<0.10).
[a] ACA funding is a composite measure of ACA Building Capacity Grantee, ACA New Access Grantee, and/or ACA Immediate Facility Improvement Grantee.
[b] Missing data were imputed using the mean value for each characteristic.

Exhibit A7.4. Multivariable Relationships Between Site-Level Characteristics and Three Different Measures of Medical Home Recognition for 503 Demonstration FQHCs

	NCQA Level 3 (n=503)		Any NCQA Level (1, 2, or 3) (n=503)		Level 3–Alternate Recognition (n=503)	
Site-Level Characteristics at Baseline	**OR (SE)**	**p-value**	**OR (SE)**	**p-value**	**OR (SE)**	**p-value**
Interventions to enhance APCPs						
Nondemonstration interventions External funding						
ACA funding[a]	**2.37**** **(0.64)**	0.001	**2.84***** **(0.84)**	<0.001	1.30 (0.35)	0.336
HRSA PCMH initiative participant	**1.89**** **(0.46)**	0.009	**2.81**** **(0.84)**	0.019	**1.97**** **(0.50)**	0.007
PCMH supplemental funding recipient	**3.95**** **(1.97)**	0.006	**5.55*** **(2.87)**	0.001	**3.47**** **(1.65)**	0.009
Service characteristics						
Years in operation						
1–30 years[b]	*[reference]*					
30+ years[b]	1.22 (0.35)	0.488	**2.09*** **(0.68)**	0.025	0.79 (0.23)	0.406
Number of service delivery sites						
2–10 sites	1.16 (1.06)	0.872	0.81 (0.93)	0.853	1.17 (1.07)	0.862
11+ sites	0.52 (0.49)	0.492	0.39 (0.47)	0.439	0.89 (0.86)	0.905
Total revenue per site (in millions)[b]	0.90 (0.09)	0.269	0.88 (0.09)	0.201	0.98 (0.10)	0.840
Number of primary care physicians[b]	1.00 (0.03)	0.916	0.98 (0.03)	0.846	1.01 (0.03)	0.744
Number of specialists[b]	**1.27*** **(0.15)**	0.044	1.15 (0.14)	0.243	1.24[†] (0.15)	0.070
Beneficiary characteristics						
Mean age[b]	0.96 (0.08)	0.604	0.97 (0.08)	0.684	1.02 (0.08)	0.784

Site-Level Characteristics at Baseline	NCQA Level 3 (n=503)		Any NCQA Level (1, 2, or 3) (n=503)		Level 3–Alternate Recognition (n=503)	
	OR (SE)	p-value	OR (SE)	p-value	OR (SE)	p-value
Mean HCC score[b]	**16.48**** (15.67)	0.003	2.70 (2.65)	0.311	**13.64**** (13.30)	0.007
Percent disabled	0.99 (0.02)	0.765	1.00 (0.02)	0.999	1.01 (0.02)	0.739
Percent dual-eligible[b]	1.02 (0.01)	0.105	**1.02*** (0.01)	0.043	1.01 (0.01)	0.368
Medicare beneficiaries attributed in year preceding demonstration[b]	1.00 (0.00)	0.190	1.00 (0.00)	0.385	1.00 (0.00)	0.233
Geographic characteristics						
PCA regions						
Central	*[reference]*					
Mid-Atlantic	**0.17***** (0.07)	<0.001	**0.13***** (0.06)	<0.001	**0.30**** (0.12)	0.003
Northeast	1.74* (0.93)	0.299	2.63 (1.66)	0.125	2.10 (1.15)	0.175
Southeast	**0.32**** (0.13)	0.005	**0.39*** (0.18)	0.045	0.68 (0.28)	0.351
West	**0.39*** (0.18)	0.037	0.49 (0.26)	0.180	0.88 (0.42)	0.790
West-Central	0.56 (0.22)	0.137	0.47 (0.22)	0.104	0.74 (0.30)	0.455
Rural-urban continuum						
Metro	*[reference]*					
Nonmetro–urban	0.86 (0.27)	0.629	1.06 (0.37)	0.864	0.70 (0.22)	0.265
Nonmetro–rural	2.16 (1.04)	0.110	4.28* (2.47)	0.012	2.51† (1.28)	0.072
Percentage of households in poverty	0.99 (0.01)	0.230	**0.97*** (0.08)	0.044	0.99 (0.01)	0.263
PCMH practice readiness						
Predemonstration medical homeness						

Site-Level Characteristics at Baseline	NCQA Level 3 (n=503)		Any NCQA Level (1, 2, or 3) (n=503)		Level 3–Alternate Recognition (n=503)	
	OR (SE)	p-value	OR (SE)	p-value	OR (SE)	p-value
Baseline RAS Level 0 (<35 points)	*[reference]*					
Baseline RAS Level 1 (35–59 points)	1.62 (0.66)	0.238	1.39 (0.63)	0.473	1.40 (0.57)	0.411
Baseline RAS Level 2 (60–84 points)	0.94 (0.38)	0.870	0.61 (0.27)	0.258	0.88 (0.35)	0.744
Baseline RAS Level 3 (85–100 points)	0.73 (0.35)	0.518	0.33* (0.17)	0.035	0.57 (0.27)	0.242
EHR functionality						
Certified EHR product	**4.50*** (1.51)**	<0.001	**3.36*** (1.26)**	<0.001	**3.20*** (1.07)**	<0.001
PCMH cultural readiness						
Ambulatory care accreditation	**0.39*** (0.10)**	<0.001	0.57† (0.17)	0.059	0.98 (0.26)	0.942
HCCN grantee	1.47 (0.38)	0.136	1.04 (0.30)	0.902	1.35 (0.35)	0.256
Participation in other CMS demonstration	1.78† (0.61)	0.093	0.67 (0.24)	0.269	**2.31* (0.90)**	0.031

SOURCE: Baseline characteristics—compiled by Truven, sent to RAND 2/29/2012; NCQA recognition—NCQA 2014 compiled by Truven; analyses by RAND.
NOTES: 351 demonstration sites (69.8 percent) achieved NCQA Level 3 recognition, 395 (78.5 percent) reached any NCQA level, and 382 (75.9 percent) gained Level 3–alternate recognition defined as PCMH recognition from AAAHC, Joint Commission, states, or NCQA (Level 3 only).
† p≤0.10; * p<0.05; ** p<0.01; *** p<0.001. Bold indicates statistically significant results (p<0.10).
[a] ACA funding is a composite measure of ACA Building Capacity Grantee, ACA New Access Grantee, and/or ACA Immediate Facility Improvement Grantee.
[b] Missing data were imputed using the mean value for each characteristic.

Exhibit A7.5. Multivariable Relationships Between Site-Level Characteristics and Demonstration Site Attrition During the FQHC APCP Demonstration

	Predicting Attrition Among 503 Demonstration Sites[a]	
Site-Level Characteristics at Baseline	**OR (SE)**	**p-value**
Number of sites with recognition	n=69 (13.7%)	
Interventions to enhance APCPs		
Nondemonstration interventions		
External funding		
ACA funding[b]	0.61 (0.21)	0.146
HRSA PCMH initiative participant	**0.45* (0.14)**	**0.012**
PCMH supplemental funding recipient	0.97 (0.57)	0.963
Service characteristics		
Years in operation		
1–30 years[c]	*[reference]*	
30+ years[c]	0.56 (0.21)	0.124
Number of service delivery sites		
1 site	*[reference]*	
2–10 sites	1.68 (1.99)	0.660
11+ sites	2.70 (3.35)	0.424
Total revenue per site (in millions)[c]	1.26[†] (0.15)	0.056
Number of primary care physicians[c]	0.93 (0.05)	0.146
Number of specialists[§]	0.90 (0.12)	0.406
Beneficiary characteristics		
Mean age[c]	0.99 (0.09)	0.934
Mean HCC score[c]	0.77 (0.85)	0.812
Percent disabled	0.98 (0.03)	0.551
Percent dual-eligible[c]	**0.97* (0.01)**	**0.032**
Medicare beneficiaries attributed in year preceding demonstration[c]	1.00 (0.00)	0.849
Geographic characteristics		

Site-Level Characteristics at Baseline	Predicting Attrition Among 503 Demonstration Sites[a]	
	OR (SE)	p-value
PCA regions		
Central	*[reference]*	
Mid-Atlantic	2.91* (1.44)	**0.031**
Northeast	0.70 (0.47)	0.595
Southeast	1.13 (0.59)	0.819
West	0.60 (0.39)	0.425
West-Central	2.11 (1.04)	0.130
Rural-urban continuum		
Metro	*[reference]*	
Nonmetro–urban	1.14 (0.43)	0.733
Nonmetro–rural	0.35† (0.20)	0.072
Percentage of households in poverty	1.04* (0.01)	**0.011**
PCMH practice readiness		
Predemonstration medical homeness (Baseline RAS)		
Level 0 (<35 points)	*[reference]*	
Level 1 (35–59 points)	0.83 (0.41)	0.705
Level 2 (60–84 points)	1.08 (0.52)	0.874
Level 3 (85–100 points)	3.61* (2.09)	**0.026**
EHR functionality		
Certified EHR product	0.43* (0.18)	**0.046**
PCMH cultural readiness		
Ambulatory care accreditation	1.12 (0.36)	0.729
HCCN grantee	0.55† (0.18)	0.072
Participation in other CMS demonstration	0.80 (0.36)	0.620

SOURCE: Baseline characteristics—compiled by Truven, sent to RAND 2/29/2012; analyses by RAND.

† p<0.10; * p<0.05; ** p<0.01; *** p<0.001. Bold indicates statistically significant results (p<0.10).

[a] 69 sites (13.7 percent) did not complete the demonstration. 41 of these sites were dropped by CMS and the rest dropped out of their own accord.

[b] ACA funding is a composite measure of ACA Building Capacity Grantee, ACA New Access Grantee, and/or ACA Immediate Facility Improvement Grantee.

[c] Missing data were imputed using the mean value for each characteristic.

Exhibit A7.6. Multivariable Relationships Between Site-Level Characteristics and Medical Home Recognition Stratified by Demonstration and Comparison FQHCs

	Demonstration FQHC (n=503)	Demonstration FQHC (n=503)	Demonstration FQHC (n=503)	Comparison FQHC (n=827)	Comparison FQHC (n=827)	Comparison FQHC (n=827)
	NCQA Level 3	Any NCQA Level (1,2,3)	Level 3-Equivalent Recognition	NCQA Level 3	Any NCQA Level (1,2,3)	Level 3-Equivalent Recognition
Characteristics	**OR (Standard Error [SE])**	**OR (SE)**	**OR (SE)**	**OR (SE)**	**OR (SE)**	**OR (SE)**
Site-Level Structural Characteristics						
Years in operation: 1–30 years§	***[reference]***					
Years in operation: 30+ years§	1.07 (0.29)	1.66 (0.52)	0.71 (0.20)	0.91 (0.29)	1.09 (0.25)	1.01 (0.24)
Number of service delivery sites: 1 site	***[reference]***					
Number of service delivery sites: 2–10 sites	1.20 (1.06)	0.70 (0.80)	1.24 (1.09)	1.78 (1.02)	1.00 (0.37)	0.52 (0.22)
Number of service delivery sites: 11+ sites	0.68 (0.63)	0.45 (0.53)	1.19 (1.09)	7.34** (4.79)	1.28 (0.55)	1.30 (0.60)
Total revenue per site (in millions) §	0.96 (0.09)	0.93 (0.09)	1.03 (0.10)	1.44*** (0.12)	1.22** (0.08)	1.12† (0.07)
Number of primary care physicians§	1.00 (0.03)	0.99 (0.03)	1.01 (0.03)	1.00 (0.03)	1.01 (0.02)	1.06† (0.03)
Number of specialists§	1.24* (0.13)	1.14 (0.15)	1.21† (0.14)	0.74* (0.10)	0.78** (0.07)	0.94 (0.05)
Ambulatory care accreditation	0.37*** (0.10)	0.56* (0.16)	0.91 (0.23)	0.63 (0.20)	0.48** (0.13)	5.96*** (1.36)
Site-Level Beneficiary Characteristics						
Mean age§	0.92 (0.07)	0.93 (0.07)	0.99 (0.08)	1.11 (0.09)	1.08 (0.06)	1.07 (0.06)
Mean HCC score§	21.63** (20.03)	4.10 (3.96)	17.73** (16.99)	0.32 (0.32)	0.38 (0.28)	0.17* (0.12)
Percent disabled	0.98 (0.02)	0.99 (0.02)	1.00 (0.02)	1.03 (0.03)	1.02 (0.02)	1.03 (0.02)
Percent dual-eligible§	1.01 (0.01)	1.02 (0.01)	1.01 (0.01)	1.01 (0.01)	1.01 (0.01)	0.99 (0.01)
Medicare beneficiaries attributed in year preceding demonstration†	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	1.00* (0.00)	1.00* (0.00)	1.00† (0.00)

Characteristics	Demonstration FQHC (n=503) NCQA Level 3 OR (Standard Error [SE])	Demonstration FQHC (n=503) Any NCQA Level (1,2,3) OR (SE)	Demonstration FQHC (n=503) Level 3-Equivalent Recognition OR (SE)	Comparison FQHC (n=827) NCQA Level 3 OR (SE)	Comparison FQHC (n=827) Any NCQA Level (1,2,3) OR (SE)	Comparison FQHC (n=827) Level 3-Equivalent Recognition OR (SE)
Receipt of External Funding or Participation in Other Demonstrations						
HCCN grantee	1.73* (0.42)	1.18 (0.32)	1.50 (0.37)	4.76*** (1.61)	2.02** (0.42)	2.01** (0.44)
ACA Building Capacity Grantee ACA New Access Point Grantee ACA Immediate Facility Improve Grantee	2.01** (0.51)	2.57** (0.72)	1.12 (0.29)	2.32 (0.73)	1.71* (0.39)	1.01 (0.24)
HRSA PCMH Initiative participant	1.66* (0.39)	1.63† (0.43)	1.79* (0.44)	3.41*** (1.01)	6.22*** (1.29)	0.97 (0.22)
PCMH supplemental funding recipient	3.88** (1.92)	5.15** (2.81)	3.45** (1.64)	0.93 (0.33)	1.14 (0.27)	3.17*** (0.87)
Participation in other CMS demo	1.73 (0.56)	0.66 (0.24)	2.17* (0.81)	0.98 (0.37)	1.41 (0.38)	1.17 (0.34)
PCA Region						
Central	***[reference]***					
Mid-Atlantic	0.17*** (0.07)	0.15*** (0.07)	0.29** (0.12)	0.40 (0.26)	2.08* (0.74)	0.08*** (0.05)
Northeast	1.45 (0.75)	2.47 (1.47)	1.84 (0.99)	3.80** (1.77)	5.18*** (1.99)	1.00 (0.39)
Southeast	0.36** (0.14)	0.40* (0.18)	0.69 (0.28)	0.86 (0.43)	1.23 (0.43)	0.71 (0.24)
West	0.33** (0.14)	0.39† (0.19)	0.73 (0.33)	0.21* (0.13)	0.82 (0.33)	0.54 (0.23)
West-Central	0.54 (0.20)	0.47† (0.21)	0.73 (0.28)	1.04 (0.45)	2.11* (0.68)	1.04 (0.33)
Neighborhood Characteristics						
Rural-urban continuum code: metro	***[reference]***			0.49 (0.20)	0.76 (0.21)	0.72 (0.21)
Nonmetro-urban	1.06 (0.33)	1.32 (0.45)	0.82 (0.25)	0.58 (0.27)	0.72 (0.23)	0.74 (0.24)
Nonmetro-rural	2.10 (0.95)	3.29* (1.76)	2.36† (1.13)	0.98 (0.01)	0.99 (0.01)	0.98 (0.01)
Percentage of households in poverty	0.98 (0.01)	0.98* (0.01)	0.99 (0.01)	0.98† (0.01)	0.99 (0.01)	0.98† (0.01)

SOURCE: RAND analysis of data provided by ACS, AIR, Claims, Claims (EBD), CMS, CMS (Demo application_, CMS (MDM), HRSA, HRSA (Form 5B), and HRSA (UDS). Recognition data from NCQA, 2014 (compiled by Truven) for demonstration sites (n=503) and HRSA, 2014, for comparison sites approaching the end of the demonstration's 12th quarter.
† $0.05<p\leq0.10$; * $p<0.05$.
§ Missing data were imputed using the mean value for each characteristic.

Bivariate Relationship Between Site-Level Characteristics and Timing of NCQA Recognition Among Sites That Received Level 3 Recognition by Demonstration End

We also examined the extent to which participation in the demonstration was associated with early (Years One–Two) versus late (Year Three) NCQA Level 3 recognition among sites that achieved this recognition (n=445). Among sites that achieved NCQA Level 3, the majority of sites were recognized in Year Three (n=322, 72 percent). (See Exhibit A7.7.)

Exhibit A7.7. Bivariate Relationship Between Site-Level Characteristics and Timing of NCQA Recognition Among Sites That Received NCQA Level 3 Recognition by Demonstration End

Site-Level Characteristics at Baseline	Early (Years One–Two)†† (n=123)	Late (Year Three)††† (n=322)
Demonstration***, n (%)	79 (64.2)	272 (84.5)
Comparison, n (%)	44 (35.8)	50 (15.5)
Site-Level Structural Characteristics		
Years in operation: 1–10 years†, n (%)	46 (37.4)	110 (34.2)
10–20 years†, n (%)	39 (31.7)	76 (23.6)
20–30 years†, n (%)	11 (8.9)	47 (14.6)
30–40 years†, n (%)	17 (13.8)	55 (17.1)
40+ years†, n (%)	8 (6.5)	21 (6.5)
Number of service delivery sites: 1 site***, n (%)	9 (7.3)	7 (2.2)
Number of service delivery sites: 2–10 sites, n (%)	67 (54.5)	181 (56.2)
Number of service delivery sites: 11+ sites, n (%)	47 (38.2)	134 (41.6)
Total revenue per site (in millions)†, mean (SD)	2.7 (2.4)	2.3 (1.8)
Number of primary care physicians†, mean (SD)	6.5 (5.5)	5.8 (5.7)
Number of specialists†, mean (SD)	0.9 (2.5)	0.8 (1.7)
Grantee-level EHR adoption status: all sites for all providers***, n (%)	103 (83.7)	216 (67.1)
Grantee-level EHR adoption status: some sites or for some providers	15 (12.2)	62 (19.3)
Grantee-level EHR adoption status: none in use	4 (3.3)	38 (11.8)
Ambulatory care accreditation, n (%)	60 (48.8)	96 (29.8)
Site-Level Beneficiary Characteristics		
Mean age*†, mean (SD)	61.0 (5.1)	62.4 (5.4)
Mean HCC score†, mean (SD)	1.2 (0.1)	1.2 (0.1)
Percent disabled*, mean (SD)	56.7 (14.8)	53.0 (16.9)
Percent dual-eligible†, mean (SD)	51.0 (16.5)	50.6 (17.6)
Medicare beneficiaries attributed in year preceding demonstration*†, mean (SD)	384.7 (276.2)	318.6 (262.6)
Receipt of External Funding or Participation in Other Demonstrations		

Site-Level Characteristics at Baseline	Early (Years One–Two)†† (n=123)	Late (Year Three)††† (n=322)
HCCN grantee, n (%)	86 (69.9)	202 (62.7)
ACA Building Capacity Grantee***, n (%)	47 (38.2)	63 (19.6)
ACA New Access Point Grantee***, n (%)	35 (28.5)	51 (15.8)
ACA Immediate Facility Improve Grantee***, n (%)	50 (40.7)	106 (32.9)
HRSA PCMH Initiative participant***, n (%)	96 (78.0)	182 (56.5)
PCMH supplemental funding recipient***, n (%)	117 (95.1)	294 (91.3)
Participation in other CMS demo, n (%)	27 (22.0)	64 (19.9)
PCA Region		
Central***, n (%)	50 (40.7)	74 (23.0)
Mid-Atlantic, n (%)	6 (4.9)	22 (6.8)
Northeast, n (%)	24 (19.5)	53 (16.5)
Southeast, n (%)	12 (9.8)	44 (13.7)
West, n (%)	17 (13.8)	52 (16.1)
West-Central, n (%)	14 (11.4)	77 (23.9)
Neighborhood Characteristics		
Rural-urban continuum: metro, n (%)	84 (68.3)	223 (69.3)
Nonmetro-urban, n (%)	31 (25.2)	82 (25.5)
Nonmetro-rural, n (%)	8 (6.5)	17 (5.3)
Percentage of households in poverty, mean % (SD %)	20.7 (11.8)	20.5 (11.2)

SOURCE: RAND analysis of data provided by ACS, AIR, Claims, Claims (EBD), CMS, CMS (Demo application_, CMS (MDM), HRSA, HRSA (Form 5B), and HRSA (UDS). Recognition data from NCQA, 2014 (compiled by Truven) for demonstration sites (n=503) and HRSA, 2014, for comparison sites approaching the end of the demonstration's 12th quarter.
NOTE: Columns 2 and 3 reflect predicting early (vs. late) NCQA Level 3 medical home recognition in combined demonstration and comparison site FQHC cohorts.
* p<0.05; *** p<0.001.
† Missing data were imputed using the mean value for each characteristic.
†† Early recognition is defines as NCQA Level 3 recognition in demonstration Year One or Two.
††† Late recognition is defined as NCQA Level 3 recognition in demonstration Year Three.

Multivariable Relationships Between Site-Level Characteristics and Timing of Medical Home Recognition for All Sites and for Demonstration and Comparison FQHCs

We used logistic regression to estimate the adjusted associations between baseline site-level characteristics and early (Years One and Two) NCQA Level 3 in three models:

1. all sites that achieved Level 3 (n=445)
2. demonstration sites that achieved Level 3 (n=351)
3. demonstration sites that achieved Level 3 (n=351) with measures of medical homeness available only for demonstration sites.

Demonstration sites with higher baseline RAS were more likely to achieve NCQA Level 3 early than were sites with low baseline RAS (see Exhibit A7.8). Ambulatory care accreditation

was statistically significantly associated with a twofold increase in odds of early NCQA Level 3 recognition among sites that achieved Level 3. External funding was also important in these analyses; however, only HRSA PCMH Initiative participation showed statistically significantly increased odds of early NCQA Level 3 recognition.

Exhibit A7.8. Multivariable Relationships Between Site-Level Characteristics and Timing of Medical Home Recognition for all Sites and for Demonstration and Comparison FQHCs

	Predicting Early vs. Late Medical Home Recognition (Among Sites That Achieve Any NCQA Recognition)		
	All Sites (n=445) ††	Demonstration (n=351)	Demonstration (n=351)
Characteristics	**OR (SE)**	**OR (SE)**	**OR (SE)**
Demonstration	0.24***(0.08)	Not reported	Not reported
Baseline Medical Homeness			
Baseline RAS Level 0 (<35 points)	Not reported	Not reported	***[reference]***
Baseline RAS Level 1 (35–59 points)	Not reported	Not reported	1.58 (0.96)
Baseline RAS Level 2 (60–84 points)	Not reported	Not reported	3.79* (2.32)
Baseline RAS Level 3 (85–100 points)	Not reported	Not reported	1.65 (1.21)
Certified EHR product	Not reported	Not reported	2.60 (1.51)
Site-Level Structural Characteristics			
Years in operation: 1–30 years†	***[reference]***		
Years in operation: 30+ years†	0.93 (0.29)	0.52 (0.21)	0.47 (0.20)
Number of service delivery sites: 1 site	***[reference]***		
Number of service delivery sites: 2–10 sites	0.46 (0.32)	0.91 (0.82)	0.69 (0.65)
Number of service delivery sites: 11+ sites	0.47 (0.35)	1.14 (1.09)	0.77 (0.77)
Total revenue per site (in millions)†	1.03 (0.08)	1.04 (0.11)	1.02 (0.11)
Number of primary care physicians†	0.97 (0.03)	1.01 (0.04)	1.02 (0.04)
Number of specialists†	1.06 (0.07)	1.04 (0.07)	1.04 (0.08)
Ambulatory care accreditation	2.58** (0.73)	2.06* (0.69)	2.02* (0.70)
Site-Level Beneficiary Characteristics			
Mean age†	0.88 (0.07)	0.95 (0.10)	0.94 (0.10)
Mean HCC score†	0.58 (0.58)	1.35 (1.51)	1.30 (1.52)
Percent disabled	0.98 (0.03)	1.00 (0.03)	0.99 (0.03)

Characteristics	Predicting Early vs. Late Medical Home Recognition (Among Sites That Achieve Any NCQA Recognition)		
	All Sites (n=445) ††	Demonstration (n=351)	Demonstration (n=351)
	OR (SE)	OR (SE)	OR (SE)
Percent dual-eligible†	1.00 (0.01)	1.00 (0.01)	1.00 (0.01)
Medicare beneficiaries attributed in year preceding demonstration†	1.00 (0.00)	1.00* (0.00)	1.00*(0.00)
Receipt of External Funding or Participation in Other Demonstrations			
HCCN grantee	1.52 (0.43)	1.12 (0.36)	1.09 (0.36)
ACA grantee[a]	1.18 (0.34)	0.92 (0.31)	1.13 (0.40)
HRSA PCMH Initiative participant	2.91*** (0.87)	2.71** (0.93)	2.81** (0.98)
PCMH supplemental funding recipient	1.62 (0.92)	0.90 (0.78)	0.88 (0.78)
Participation in other CMS demo	1.20 (0.40)	0.90 (0.36)	0.96 (0.40)
PCA Region			
Central	***[reference]***		
Mid-Atlantic	0.67 (0.40)	0.29 (0.24)	0.31 (0.26)
Northeast	0.66 (0.27)	0.66 (0.32)	0.53 (0.27)
Southeast	0.57 (0.26)	0.55 (0.28)	0.47 (0.26)
West	0.48 (0.23)	0.25* (0.15)	0.18** (0.11)
West-Central	0.18*** (0.08)	0.38* (0.17)	0.28** (0.13)
Neighborhood Characteristics			
Rural-urban continuum code: metro	***[reference]***		
Nonmetro-urban	1.36 (0.49)	1.43 (0.58)	1.27 (0.52)
Nonmetro-rural	1.46 (0.64)	1.23 (0.63)	0.89 (0.48)
Percentage of households in poverty	0.99 (0.01)	0.99 (0.01)	0.98 (0.01)

SOURCE: RAND analysis of data provided by ACS, AIR, Claims, Claims (EBD), CMS, CMS (Demo application, CMS (MDM), HRSA, HRSA (Form 5B), and HRSA (UDS). Recognition data from NCQA, 2014 (compiled by Truven) for demonstration sites (n=503) and HRSA, 2014, for comparison sites approaching the end of the demonstration's 12th quarter.

* p<0.05; ** p<0.01; *** p<0.001.

† Missing data were imputed using the mean value for each characteristic.

†† Analyses limited to sites that received NCQA Level 3 recognition by demonstration end; insufficient number of comparison sites (n=94) to include in multivariate analyses.
[a]This includes ACA Building Capacity Grantes, ACA New Access Point Grantees, and ACA Immediate Facility Improve Grantees.

A8. Qualitative Site Case Summaries

We developed the following detailed case summaries based on our qualitative interviews and site visits with five demonstration FQHCs to illustrate the dynamics and pathways to PCMH recognition examined in the cross-case analyses in Chapter Six. These cases were specifically selected to illustrate how site context and characteristics—including practice and cultural readiness—interact with implementation processes—such as change strategies and uptake of demonstration and other external supports—to promote or inhibit PCMH recognition. The first three case narratives describe sites that attained NCQA Level 3 recognition, but starting from different levels of medical homeness (advanced, basic, and low) prior to the demonstration. The fourth is a site that exhibited low medical homeness prior to the demonstration and attained Level 2 recognition by the end of the demonstration period. The fifth case is a site that attrited from the demonstration without attaining any form of recognition.

Methods for Case Studies

The case studies were developed using data from the site interviews and visits. We first performed a *within-case* analysis triangulating the multiple data sources for each site visit. Each of the evaluation team members that conducted a site visit separately reviewed the interview transcripts, observation notes, and collected documents to identify key factors and dynamics related to that site's PCMH transformation and recognition experience in four domains: key site background and context; PCMH implementation strategy and milestones; major practice and care changes; and conclusions and lessons learned. The bulleted lists of factors and dynamics from both team members were combined, along with site characteristics from the evaluation's secondary data sources, into a single site visit summary reflecting the site's unique PCMH journey. All evaluation team members involved in conducting site visits collectively reviewed the five site visit summaries to identify common and unique factors across sites. These insights informed the initial hypotheses and factors utilized for the qualitative cross-case analysis with all sites in the qualitative interview sample, and several of the site visit summaries were specifically used as case illustrations for results of the cross-case analysis. In addition, the site-visit interviews were included in the thematic analysis of all the follow-up site interviews described above.

Case One: Advanced Medical Homeness Predemonstration, Attained Level 3

Site D15 is an example of a site with a high PCMH practice readiness (EHR system in place and a high level of medical homeness), weaker cultural readiness (due to turnover in leadership and late staff engagement), and strong uptake of demonstration TA.

This FQHC, in a relatively remote, rural part of a southwestern state, employed fewer than seven full-time–equivalent (FTE) providers. This site was rated high on PCMH practice readiness measures due to having a fully functional EHR system prior to the start of the demonstration and several well-functioning medical home elements already in place. For example, this site had long provided self-management support and active population management through a strong and established *promotora* (i.e., community health worker) program. Site D15 was using a basic care team or "teamlet" model in which providers were intentionally paired with a medical assistant and worked in concert. This site was not doing systematic previsit planning to prepare for patients' visits, however, and it was not systematically tracking specialist referrals and hospitalizations.

Site D15 had some history of organizational improvement work: It reported having participated in one previous initiative focused on QI-QA. However, the chief executive officer (CEO) who led the application to the demonstration left before the work of the demonstration got under way. In the early stage of the demonstration, no point person was identified or tasked with leading it. Site leaders that we interviewed described significant delays in getting the project off the ground because it lacked a clear champion or responsible party. The demonstration was essentially lost in the shuffle when leadership and management roles changed.

After about a year's delay, a person with long tenure at the organization was appointed as change team leader. This person had knowledge of the EHR systems, quality measures, and staff roles across the three sites that made up the FQHC. With executive support, the change team leader organized a leadership retreat on PCMH that included department heads across the FQHC, developed a "really great PCMH team," and crafted and promoted a common vision of the PCMH effort. Site leaders described several techniques to facilitate change, including rolling out well-articulated changes one at a time to reduce burden. The site also benefited from key supportive staff, such as a physician new to the site but experienced in NCQA Level 3 from a prior role, as well as a dedicated, experienced nurse trainer who took on a critical role educating new staff on PCMH and quality practice procedures using group training and one-on-one monitoring and reinforcement. A recurring challenge at this site was how to engage tired and busy staff. They described needing to reorient the site toward providing care when the patient needed it, not when it was convenient for the clinic. Site leaders described how sharing a

research article on PCMH that emphasized finding "joy in practice" was very helpful in illustrating to providers and other staff the goals and potential for PCMH to improve their experience of practicing medicine (Sinsky et al., 2013; pp. 272–278). Early changes were focused on the care practices and documentation that needed to be in place for the NCQA application. But as the demonstration process went on, the site reported more in-depth conversations about integrating across service lines and coordinating care.

Site D15 became a high utilizer of demonstration TA, finding several resources "very helpful;" it also reported receiving some support for PCMH transformation outside the demonstration. The site leader described using staff education about PCMH as a vehicle to garner buy-in, although at the later interview the site leader expressed regret for not adequately involving key staff early enough in the project.

Despite some pitfalls in how they organized and executed their change efforts, this site was able to receive NCQA Level 3 recognition by the end of the demonstration, likely because they had a good foundation of PCMH practices in place at baseline and took advantage of the demonstration TA support.

Case Two: Basic Medical Homeness Predemonstration, Attained Level 3

Site D01 was a midsize (between seven and 20 FTE providers) urban health center on the edge of a major city in the West. Site D01 had a moderate level of cultural readiness for PCMH transformation. On the one hand, they had been involved with two prior major QI-QA initiatives and reported PCMH champions among providers and support staff. Leadership support for the demonstration was slower to develop, and interview respondents at this site described leadership coming on board only after PCMH changes began producing noticeable QI and productivity gains.

This site had lower levels of PCMH practice readiness than many other sites, as defined by QI experience, leadership support, and staff buy-in. For example, this site was working to implement an EHR system, but it was not yet fully functional at the time of the first interview, about one year into the demonstration period. Also, the site had some medical home practices in place, but was not advanced in implementing them (e.g., the site's population management processes tracked only some measures and did limited outreach).

This site received technical and financial support for PCMH transformation from other sources beyond the demonstration, but was also a high utilizer of the demonstration TA. When asked about which sources and types of external PCMH supports were used during the demonstration period, Site D01 reported nine different PCMH supports, most of which were TA associated with the APCP demonstration. They noted six of the nine supports as being "very helpful," suggesting that the external PCMH supports that they

accessed did in fact meet the needs they had for PCMH information, coaching, and other support.

This site applied to NCQA in the second year of the demonstration and attained Level 2, then reapplied and was recognized at Level 3 by the end of the demonstration. This site is an example of how moderate levels of cultural readiness and high utilization of TA were able to help a site overcome structural weaknesses.

Case Three: Low Medical Homeness Predemonstration, Attained Level 3

Site D12 was an FQHC with fewer than seven FTE providers, centered on one main clinic in a small town in a rural part of the upper Midwest. This site implemented an EHR system concurrently with the demonstration, which, as occurred with other sites taking the same approach, meant that PCMH took "a back seat" to the EHR change effort. However, Site D12's implementation experience was positive and provided major benefits. Because the site had a long, historically close relationship with a local hospital system, it purchased the same brand of EHR products, allowing close and immediate integration with hospital records and most specialists used by the site's patients. The site also used hospital IT support to train the providers, which was very effective.

After about a year of concentrating on the EHR adoption, a new quality manager with a nursing background took over the PCMH effort. This person was an effective change leader who developed a detailed work strategy and a coherent plan to introduce, evaluate, and monitor changes.

Site leaders at Site D12 reported leadership commitment. In addition to educating on PCMH education, the new quality manager emphasized involving leaders and staff in the PCMH effort to overcome "natural resistance" to change. For the most part, this manager relied on informal PCMH champions within different sites and departments.

Site D12 had only one prior experience with a large-scale QI effort, but they treated the PCMH implementation effort as complementary to several other practice transformation initiatives that were taking place, including integrated dental care, integrated behavioral health, and cross-training of care team members. They were moderate users of the demonstration TA, almost all of which they described as "very useful."

Their first application to NCQA resulted in a Level 2 score, with most points lost due to an inability to show adequate documentation of care. Site respondents reported that the issue was less about the care they were providing and more about EHR capability and consistent documentation of care by providers and staff.

Despite low levels of medical homeness, several site strengths, such as the high cultural readiness and the strong uptake of TA, fostered Site D12's attainment of Level 3 recognition on their second application attempt by the end of the demonstration period.

Case Four: Low Medical Homeness Predemonstration, Attained Level 2

Site D09 was a relatively small site, with fewer than seven FTE providers, in a sprawling metropolitan area located between two midsize regional urban centers. This site entered the demonstration without a fully functional EHR system and with very few medical home practices in place. They implemented EHR functionality sometime after the first interview, about a year into the demonstration, and faced considerable challenges that they were still dealing with at the follow-up interview.

They complained of lack of leadership support early in the demonstration. Close to the end of the demonstration, site respondents reported they were empowered to hire and train staff as needed, because leadership was finally aware of the challenges, but they felt that they could only do so much at the "11th hour." The first iteration of a change team that they established consisted of too few people, according to site leaders, rendering it ineffective. Their missteps with planning the change process may have been related to their limited experience with QI-QA initiatives; they had only completed one previously. They also complained of a lack of staff and provider champions.

This site used only two sources of external PCMH supports—the PCA coach as well as an outside consultant. In the follow-up interview, respondents from this site explained their low uptake of demonstration TA as what they could manage within their busy schedules. They said they did not have time to engage with a lot of the demonstration support, and they felt like they got what they needed from the TA they did use.

Site D09 was challenged by low levels of medical homeness, lack of early EHR functionality, and lack of leadership support. Site respondents described strategic use of TA, which aided recognition at Level 2, but the site failed to attain Level 3.

Case Five: Withdrew from the Demonstration in Year Three

Site D05 was a small site in a rural, agricultural part of a southern state, about an hour's drive from the closest midsize city. This site had some basic medical home practices in place prior to the demonstration period. It had no EHR system at the time of the first interview, about a year into the demonstration period, and moderate levels of cultural readiness (leadership support, but less provider support, and little experience with organizational change).

This site ended up withdrawing from the demonstration about five months before the end of the demonstration period. This decision was based on a reevaluation of organizational priorities. The FQHC had initially joined the demonstration not fully aware of their lack of foundation for a PCMH and how much work it would be (admitting they "chased a little bit of money"). After experiencing significant turnover in the executive team, and perhaps having gained a better understanding of the NCQA process, the leadership decided to pursue recognition by the AAAHC rather than NCQA. The decision to withdraw from the APCP demonstration and pursue a longer-term plan for alternative recognition was supported by the new chief executive officer because he wanted change to be "real" and longer-lasting and did not want to "just check the boxes." The switch to pursue AAAHC recognition resulted from a perception, based on information from PCMH consultants provided through the regional Health Center Control Networks (HCCN), that AAAHC recognition was better suited to smaller, rural FQHCs. Additionally, they already possessed their general ambulatory accreditation through AAAHC and could certify for PCMH at their next site visit.

The lack of communication during the staff transition phase was the greatest challenge for this site because new staff did not know much about the NCQA recognition process or the demonstration. For example, when the site received a letter, shortly before they withdrew, notifying them that they were out of compliance with the terms of the demonstration, site leaders described being confused because they did not really understand that they were in the demonstration program. Communication during this leadership change period seemed to be an ongoing challenge. At the follow-up site visit, two weeks after the site decided to withdraw, the research team talked with staff who had not yet been informed that the APCP demonstration was no longer in effect at their site.

Notably, practice changes that were implemented during the demonstration period (e.g., centralized scheduling, process for referral tracking, EHR enhancements) were perceived as helpful and were maintained over time, despite the stalled recognition process.

A9. Conventional Cross-Case Analysis

In Chapter Six of the main report we report the results of the conventional cross-case analysis that relied on manual sorting and pattern finding (Yin, 2013; Eisenhardt, 1989) to explore combinations of factors in our conceptual model related to the outcome of attaining NCQA Level 3 recognition. The conventional cross-case analysis drew on the same qualitative and quantitative sources of site-level data collected in the evaluation, described in detail in Appendix A2 and in Section 6.3 of the main report.

To assess the relationship between components of readiness and NCQA recognition status, we populated separate comparative tables for demonstration (n=20) and comparison sites (n=10) with all the initial indicators described above. In keeping with our developmental approach, we then sorted sites by level of predemonstration medical homeness to examine whether combinations of strengths and weaknesses on other factors were associated with a site's PCMH recognition outcome depending on their respective PCMH practice "starting points."

Conventional Cross-Case Analysis Results

Demonstration Sites

A condensed tabulation of key site attributes is shown in Exhibit A9.1. The table is ordered by level of medical homeness prior to the demonstration (second column), then by final recognition status (right-most column), to identify whether sites starting from different levels of medical homeness experienced different trajectories of factors for varying recognition outcomes. Italicized entries within each column denote areas of deficits for each factor.

Exhibit A9.1. Demonstration Site Attributes Identified with Qualitative Analyses as Predicting NCQA Level 3 by Demonstration End

Case ID Number	Predemonstration "Medical Homeness"	Fully Functional EHR	Cultural Readiness	Total External PCMH Supports	Final Recognition Status
D18[a], D07	Advanced	At baseline	High	4–5	Level 3
D17[a], D19[a]	Advanced	At baseline	Medium	3–4	Level 3
D15	Advanced	At baseline	*Low*	8	Level 3
D13	Advanced	*During demo*	Medium	7	Level 3
D14	Advanced	*During demo*	*Low*	8	Level 2
D02	Advanced	At baseline	*Low*	5	Excluded[b]
D04, D20[a]	Some practices	At baseline	*Low*	4–7	Level 3

Case ID Number	Predemonstration "Medical Homeness"	Fully Functional EHR	Cultural Readiness	Total External PCMH Supports	Final Recognition Status
D03	Some practices	*During demo*	High	8	Level 3
D10[a]	Some practices	*During demo*	Medium	7	Level 3
D01	Some practices	*No*	Medium	9	Level 3
D08	Some practices	At baseline	*Low*	2	Excluded
D05	Some practices	*No*	Medium	2	Withdrew
D11	*Few/no practices*	At baseline	Medium	3	Level 3
D16	*Few/no practices*	*During demo*	High	9	Level 3
D12	*Few/no practices*	*During demo*	Medium	9	Level 3
D06	*Few/no practices*	At baseline	*Low*	9	Level 2
D09	*Few/no practices*	*No*	Medium	2	Level 2

NOTE: Italicized text indicates deficits in attribute.
[a] Site had previously attained NCQA recognition to the 2008 standards.

A review of the table above (Exhibit A9.1) indicates that there was limited variation in the outcomes of demonstration sites; the large majority in the qualitative sample attained Level 3 recognition by the end of the demonstration. **It was not necessary to have implemented advanced medical home practices prior to the demonstration period, even though it might have helped**. Additionally, a combination of four elements also seemed to play a role in Level 3 recognition in the demonstration qualitative sample:

- predemonstration medical homeness
- predemonstration EHR functionality
- cultural readiness (QI experience, leadership support, staff buy-in)
- use of external PCMH supports.

In most instances, sites with weaknesses in two or more areas failed to attain recognition (i.e., sites D06, D09, D14 in Exhibit A9.1). Sites D16 and D12 are exceptions to this rule. These two sites had few or no PCMH or EHR practices in place prior to the demonstration. However, they had medium to high levels of cultural readiness (i.e., leadership and staff support) and intensive use of demonstration TA provided enough momentum for them to successfully attain Level 3 recognition.

The case examples presented in Appendix A7 illustrate the internal dynamics at sites that were weak in one or more areas. The pattern of findings in the conventional cross-case analysis of demonstration sites suggests that **having areas of strength is sometimes sufficient to overcome one and sometimes two deficits, but that sites lacking sufficient readiness for PCMH transformation (both practice and cultural readiness) and sufficient engagement in the demonstration were unable to attain Level 3 recognition**.

Comparison Sites

Exhibit A9.2 shows results of the traditional cross-case analysis for comparison sites. It distinguishes between sites with high, moderate, and low levels of medical homeness prior to the demonstration. As with demonstration sites, comparison sites at all levels of predemonstration medical homeness were able to attain PCMH recognition. However, **comparison sites with few or no medical home practices in place were much less likely to go on to receive medical home recognition than were comparison sites with higher levels of structural readiness prior to the demonstration period**. Notably, comparison sites mentioned relatively few sources of TA compared with demonstration sites, which suggests a key difference between demonstration and comparison sites. For example, the range of different types of TA used by demonstration sites was 2–9, while the range for comparison sites was 0–2.

Similar to demonstration sites, **comparison sites' attainment of recognition is predicted somewhat by PCMH practice readiness and cultural readiness and by use of external PCMH supports (TA and funding)**. For example, Sites C09, C06, C08, and C05 demonstrate how moderate to high levels of baseline readiness and use of external supports translated to recognition. Some sites, however, did not follow this pathway. For example, site C01 was only "pursuing" at the end of the demonstration period, despite advanced medical homeness, high cultural readiness, and active use of external PCMH supports. Similarly, Site C04 had areas of strength that—unlike the patterns found in the demonstration sites of strengths compensating for weaknesses—did not overcome the deficit of low medical homeness prior to the demonstration. This pattern in comparison sites likely occurs because not all sites were pursuing recognition at the beginning of the demonstration period, suggesting that formally pursing recognition is a precondition, after which PCMH practice readiness, cultural readiness, and use of external TA and funding can help facilitate PCMH recognition.

Exhibit A9.2. Comparison Site Attributes Identified with Qualitative Analyses as Predicting NCQA Level 3 by Demonstration End

Case ID Number	Predemonstration "Medical Homeness"	Fully Functional EHR	Cultural Readiness	Total External PCMH Supports	Final Recognition Stage or Status
C09[a]	Advanced	At baseline	High	2	Recognition (2011 L2)
C01	Advanced	*No*	*Low*	2	Pursuing
C06	Some practices	At baseline (limited)	*Low*	1	Recognition (JC-PCMH)
C08	Some practices	At baseline	*Low*	0	Recognition (JC-PCMH)

Case ID Number	Predemonstration "Medical Homeness"	Fully Functional EHR	Cultural Readiness	Total External PCMH Supports	Final Recognition Stage or Status
C05	Some practices	At baseline	*Low*	2	Recognition (2013 L2)
C10	*Few/no practices*	At baseline (limited)	*Low*	2	Recognition (2011 L3)
C07	*Few/no practices*	*n.d.*	Med	2	Pursuing
C03	*Few/no practices*	At baseline	*Low*	1	Pursuing
C04	*Few/no practices*	At baseline	Med	2	Pursuing
C02	*Few/no practices*	At baseline (limited)	*Low*	1	Not pursuing

NOTES: JC-PCMH = Joint Commission PCMH recognition.
Italicized text indicates deficits in attribute.
[a] Site had previously attained NCQA recognition to 2008 standards.

Limitations of Conventional Cross-Case Analysis

The main limitations of the conventional cross-case analyses are related to variability in the amount of data available for certain sites, particularly between the demonstration and comparative qualitative site samples. At follow-up, the interviews for five of the demonstration sites in the qualitative sample were conducted during site visits, which yielded additional data per site (i.e., multiple interviews and nonparticipant observations, versus single follow-up telephone interviews for all other sites). In addition, one of the visit sites was only added to the qualitative sample at follow-up (to replace one of the baseline demonstration sites that declined a follow-up interview), and thus lacked a baseline telephone interview. Both these variations (additional site visit data for some sites, and a missing baseline interview for one) resulted in variability in the amount of source data among sites, though we found no indication of systematic variation among the five sites that received site visits and other demonstration sites. Given the semistructured format of the site leader interviews, not all interview topics were covered with the same degree of emphasis across sites. Missing data, however, appeared to be less a problem *within* each intervention condition (i.e., demonstration and comparison sites) than *across* them. The majority of comparison sites were missing data on three or more NCQA domains that were scores to create predemonstration medical homeness, a key component of PCMH practice readiness. In contrast, none of the demonstration sites had a significant lack in this regard. This difference implies that comparison sites spent less time describing their current practices and changes made in the interviews, in part because not all comparison sites were clearly engaged in PCMH transformation. In addition, the indicators used for the readiness and structural change domains in the conventional cross-case analyses are relatively broad, and do not allow distinguishing effects of many of the separate constructs posited in our conceptual model (e.g., the

conventional cross-case analyses above include a single indicator of "PCMH cultural readiness" that reflects a combined assessment of leadership support, staff buy-in, and previous site QI/QA experience).

The QCA cross-case analyses below mitigate some of these limitations by deriving refined indicators for several of the constructs in our conceptual model, and by focusing on the demonstration sites (n=20) in the qualitative interview sample.

A10. Qualitative Detail for Change Management Challenge and Facilitator Themes

This appendix provides qualitative details and illustrations of the change management themes discussed in Chapter Seven. We present the data in an order that generally reflects the relative prevalence with which the themes were discussed by demonstration FQHCs and partly reflects similarities in subject matter. We follow the description of each *challenge* with a description of the *facilitators* or strategies that helped demonstration sites overcome the challenge. PCA leaders' comments on these topics and the experience of comparison sites with these themes are also included, when available. The discussion of each general change management theme concludes with a table summarizing the major issues related to the theme, the ways in which the particular features of PCMHs contribute to the issue, the ways in which sites' FQHC status may have contributed to both challenges and facilitators pertinent to the issue, and a summary of strategies used by demonstration sites to address challenges. Unedited excerpts from onsite interviews are included.

Provider and Staff Buy-In

Challenges

Resistance to change. At both baseline and follow-up, respondents described several difficulties getting providers and other staff on board with the idea of (and changes required for) the PCMH. Some challenges seemed generic, applicable to the broad area of health care improvement and design. For example, overall resistance to change, a widespread issue in health care improvement and redesign, was often cited as a challenge.

As new approaches to care (e.g., population management) and care practices were integrated into existing practices, many sites perceived resistance to the extent of the changes and all the new demands, given other reporting requirements.

> And not that those aren't good things, but it's adding additional things for them to do, on top of the fact that we are an FQHC who has to meet the Title X standards of how they want us to document things and meet the UDS standards of how they want us to document things, and then meaningful use. So, for those things that were outside of all the other initiatives that we already have going on, they just really had a hard time with adding one additional thing or two additional things or additional places for them to "click here."

Although resistance to change was most often described as foot-dragging or hesitancy to change, rather than outright opposition or resistance, some sites did experience outright resistance of staff or provider to PCMH changes, such as this respondent:

> In some clinics it required saying, "You get onboard or you find another job." It was that tense and difficult. So that, of course, did not create the best transition environment but it became necessary. And some people left, including providers.

Burden of change. In other cases, lack of buy-in to PCMH changes was attributed to providers feeling overburdened by changes, particularly the need for additional documentation. PCMH changes required providers and other staff to do more within their already busy days.

> It came to a point where a lot of providers just kind of said, "That's enough. This is getting out of control." This is across the board and we had twice a year all the providers meet and said, "Look, this is getting ridiculous. No one can even do their daily work without finding that they haven't ticked this or they've been told you didn't tick this, when you didn't even know the you were supposed to tick it."

> The providers, most of them are committed. But since they have a lot of demands, some providers find it difficult to meet the requirements and do the steps needed.

> Our providers are already busy with taking care of patients, documenting, a lot of paperwork. So if we continue to add more tasks [with PCMH], it may be very difficult for them.

The emphasis on documentation of care practices within PCMH implementation—documentation that was not necessarily aligned with other metrics that FQHCs are required to track—was likely the source of provider skepticism, reported by one site, about how accurately all the required metrics capture quality and appropriateness of care.

> There's been, I think, a significant concern—and a really important one—amongst clinicians, of "This is all measurable stuff. And what about the time I spend?" You know, our patients are complex, with many, many issues, and none of this captures that. . . . The best I can respond is, "You're right, this doesn't capture that. This is *a piece;* it is not the *only piece*. The stuff that's not measurable is not measurable."

Difficulty understanding the PCMH model. Some resistance specific to the PCMH practice changes stemmed from lack of comprehension of the model and the purpose of the transformation. In these cases, sites discussed the importance of organizationwide understanding and affirmation of PCMH principles, and the obstacles to attaining that consensus. Other staff and providers questioned the innovation or value added by the PCMH model; they failed to appreciate differences between their existing care practices and the consistent and comprehensive model of care envisioned by the PCMH model.

> We very quickly discovered it was really not just an administrative department project. This required the clinical team, a complete change of perspective in how they approached their day and their patient care. So we've discovered where we had the most pushback was where we really needed to make the most changes and bringing on clinical care team people—doctors, MAs—who could understand, could sit them down, and really talk through the benefit for the patient, why we want to do this. It's not just to make busy work or to make money. It's to change the health care the patients are receiving and their perspective of health care. Then, they became more engaged and we started making progress.
>
> You can't have [only] one PCMH expert. You have to have everybody, everybody has to come along and be PCMH experts all at the same time, and I think that's been a challenge for us. Because it's great that you have an administrative person who knows all of this PCMH lingo and, I don't know, the right steps to take, but that one or two administrative people can't do, you can't do the PCMH stuff without involving everybody and having everybody be educated and on the same page.
>
> Working on some of the things . . . I haven't had people throw things at me or anything, so I always think that's a good thing, but I think for many of them, it's like "Well, isn't this what we've been doing?"

Facilitators and Strategies

Motivating buy-in. In the context of discussing challenges to engaging providers and other staff in PCMH transformation, demonstration sites expressed the importance of working to attain buy-in and support. Buy-in was achieved in several ways, such as explaining to providers that PCMHs allow for efficiency in the provision of care and that the new changes will ease their workload and lessen their work burden. Some sites chose to share success stories and education about the benefit that the PCMH model provides to patients to raise morale and garner support. In addition to training, leveraging friendly competition among providers was a creative way to engage staff and team members in PCMH transformation.

> I think, over time, we kept trying to bring out patient wins, so to speak. We would, at meetings, bring the care managers with the providers and tell them success stories as motivation as to why we're doing what we're doing. So real-life examples, you know, "Hey, this diabetic hadn't had a machine or they had a machine, but did you know, they never knew how to use it for six months? And because of the care manager they now know how to use it. And for the first time, we've gotten their A1Cs down out of the double-digit range." So, those are the types of things we tried to highlight to help motivate people to keep going with the project. Because it was hard, it just at times seemed like we were just asking them to do more and more and more in less and less time.
>
> We used the doctors against themselves . . . First it was like, "Oh, we've got to do that?" and then pretty soon you publish a report that "Dr. X did 80 percent on this and Dr. Y or Dr. Z did 47 percent." Then they're like,

> "Well, wait a second, she's not better than me. I can do that. My MA better get on board."

Explaining importance of PCMH changes. According to site leaders, education was also critical. Efforts to explain to staff how and why PCMH changes were important to the overall goal and mission of the FQHC were effective strategies to attaining buy-in.

> Site visits [to educate staff] really started with [my predecessor], and we'll continue to do that through 2011 standards and 2014 standards because I'm a big believer in terms of saying, "Here's the what, but here's the why and the how," so people start to connect the dots as we make this transformation.

Capitalizing on site leadership support. Another strategy for gaining staff support was capitalizing on site leadership vision and support for PCMH changes. This "top-down" encouragement to get on board with PCMH was described as a successful strategy in which top leaders could get staff excited about the potential for the transformation.

> I think the only believer I need is our CEO, which has started that transformation from the top down. Then, from there, our Vice President of Clinical Affairs is more of a holistic provider and understands that. And from there I can piggyback on their coattails to make sure that the things that we do are transformed through the operations. And here again, those true believers out into the operations are becoming more and more used to the idea. I think that's the key that we have to focus on, because if you hear the message from the top you continue to put those pieces together at the day-to-day operations.

In addition to people in formal leadership roles endorsing the PCMH model, another facilitator of general staff buy-in was the presence of provider or other influential staff "champions," individuals who would vocally support and engage in PCMH change efforts. In explaining the role of champions, one respondent discussed the role of leadership support and proper staffing of the change team, while emphasizing that with large organizations, having informal support from key individuals was necessary to spread change.

Insight from PCA Leaders

Importance of provider buy-in. In discussing provider and staff buy-in, PCA respondents focused mainly on buy-in and the role of champions as facilitating PCMH implementation. One PCA respondent suggested that younger providers were more likely to adapt to new changes and processes.

Experience of Comparison Sites

The comparison sites' administrative staff used several strategies to motivate and engage providers (see Exhibit A10.1). These strategies included education about the

philosophy and value of PCMH for patients, and emphasizing that PCMH changes would create efficiencies designed to reduce provider burden (i.e., through a care team model).

Exhibit A10.1. Summary of Challenges and Strategies Pertinent to Provider and Staff Buy-In

Type of Challenge	Specific Example	Specific Aspect of PCMH That Affects Challenge	Specific Aspect of FQHC That Affects Challenge	Solution Strategies or Facilitators that Reduce or Resolve Challenges
General reluctance to change	• Anxiety about effects of changes • Skepticism about impact or lasting effect of changes	• Many changes required at once • Successful changes are sequential; if first one is not successfully implemented, subsequent change may be infeasible	• Poor experiences with past quality tracking programs or alternative practice models	• Ongoing, incremental general education on PCMH principles • Sharing patient "success stories" attributed to PCMH
Need for organization-wide understanding of PCMH broad involvement in transformation activities	• Struggle to involve and coordinate administrative and clinician efforts	• Proportion and range of staff required to implement changes	• Perceived lack of time for staff education and training	• Ongoing, incremental general education on PCMH principles • Sharing patient "success stories" attributed to PCMH
Provider overload	• Provider resistance to increased documentation requirements • Administrative burden of additional reporting requirements	• Transformation requires the standardization and documentation of many clinical activities	• FQHCs already have several layers of reporting requirements • Perceived lack of time within patient visit to do more EHR documentation	• Harnessing competitive spirit by publishing statistics, to challenge providers to improve documentation • Provider champions to demonstrate new practices are feasible and beneficial
Conflict between leadership and providers around PCMH implementation	• Providers compelled to adopt new practices, creating stress and some turnover • Providers sometimes skeptical of value of PCMH focus on specific metrics; openly challenged management about validity of new approach	• Focus on certain measurable outcomes caused some providers to feel devalued or reduced to a number	• FQHCs are already high-stress and high-turnover environments—additional conflict may exacerbate problems	• Positive and sincere belief in PCMH from leadership to help craft a vision for the site that staff want to be part of

SOURCE: RAND analyses of qualitative interviews from demonstration and comparison FQHCs.

Educating Providers and Staff on Changes

Challenges

Difficulty getting training time. Sites reported difficulties securing enough provider and staff time and attention to conduct training on PCMH, including new procedures and workflows, as well as educating them on the implications and importance of the changes, which they felt was crucial to sustaining practice changes.

Facilitators and Strategies

"Baby steps." Demonstration respondents at both baseline and follow-up described how approaching PCMH in a systematic and incremental manner facilitated the roll-out of PCMH, particularly because of the number of changes needed and because of the transformative nature of most of the changes. As one respondent put it: "Baby steps, and the incremental approach."

Making the effort to educate providers. Sites used several approaches to educate and communicate PCMH concepts to providers and staff, including explaining how changes are consistent with current practices and what outcomes PCMH transformation is designed to attain. Respondents described wanting to connect PCMH methods to other practice improvement models or goals, but emphasized the importance of distinguishing PCMH as an overarching approach to patient care that may be different from what they were used to.

> I think that time—in terms of explaining the *why*, say "this is good care and this is the way we should be doing business," because those are the kind of things that, if we don't explain those now, we'll miss that opportunity to train the next generation of health care providers and get them in the fold in terms of "this is the way . . . health care needs to be delivered to provide the best possible care." I mean, we've tried so many different things . . . we have too many letters in terms of TQM [total quality management] and PI [performance improvement] or QA or that sort of thing. And people have gotten numb to that, versus "this is the best way to do it." And I think if we can continue to take that time, I think as an organization—I know, we'll be better, and I know as an industry we'll be better.

Involving providers in structuring care teams. Many sites used training sessions and presentations to communicate PCMH changes to FQHC providers and staff. A few sites convened learning groups and engaged other sites ("sister" FQHCs) to facilitate group sharing and understanding of PCMHs. One site described a successful strategy for educating and engaging providers about changes when they assigned them a role in organizing their newly formed care teams. This strategy is connected to what sites might have done to garner provider buy-in, but speaks to the potential for "learning through

doing" in the primary care setting. This approach created an opportunity for providers to learn about the parts of PCMH strategies that were required, but also to understand that their role in leading the care team was crucial to the actual implementation and execution of the requirements. This approach had the added benefit of attempting to balance the tension between the standardization of PCMHs and individual provider and team "styles." As one respondent explained:

> Well, when we did the PDSA [Plan-Do-Study-Act], we said, "OK, this is going to be a provider led team," which makes sense because each provider has a different style. There are certain things amongst the groups and teams that have to be documented a certain way. But how you choose to practice—who does what, who's reviewing some documents, who's recording this—that's all provider-driven.

Insight from PCA Leaders

Resistance arises from lack of transparency and involvement. PCA respondents discussed educating providers and staff about changes as a labor-intensive and time-consuming but essential part of PCMH transformation. They highlighted provider and staff surprise and resistance when adequate education and transparency about plans for practice changes were not prioritized. According to PCA respondents, early and active engagement of clinic staff, as well as education about the justification and motivation of the PCMH model, were important facilitators of PCMH transformation. They also noted how large sites or those with a larger proportion of new staff faced challenges in keeping staff up to date.

> And I think that's one of the reasons that [the] presentations on finding joy in practice were so important to the providers, because I think that folks at the corporate level had assigned certain parts of this work to a few select individuals and it didn't really flow down into the provider's day-to-day work, until a lot of the background had been done. I think it felt to them like, "Oh, all of the sudden we're changing everything"—when in fact, at the corporate level, things were being changed. Policies were being changed. Ideas were floating around, the move toward more team-based care was being talked about, but that was all being done at a leadership level or administrative level. And then, when it came down to where the providers saw a change in their day-to-day practice, I think it felt almost like it was, "all of the sudden we're doing these things different and we don't know why." So, I think it always would be more helpful if this was approached from, really, a team within the clinic that's working in the trenches, if you will, versus this work being done and then kind of paint everybody with that paintbrush and all the sudden they don't know why they turned orange.
>
> There are so many initiatives all at the same time, it's just overwhelming to folks. . . . I think it was out of kindness, almost, that the administration, in some cases at least, said, "Let's don't burden everybody with this work. Let's do it and then give it to them." But

> sometimes, unless you're part of that groundswell and that work, it doesn't make sense to you.
>
> The largest health center . . . had seven sites within one health center in the project, and also our largest health center in the state, had just as many challenges to overcome as the smaller [sites] . . . They still have all that staff that has to be trained on how to do the work, so [their size] just magnifies it.

Experience of Comparison Sites

Distinguishing PCMHs from other transformation efforts. Similar to demonstration sites, comparison sites discussed challenges related to educating providers and staff on PCMH transformation changes (Exhibit A10.2). However, demonstration sites focused on educating providers and staff about the "why" of PCMHs, whereas comparison sites talked about disambiguating PCMHs from other reporting (e.g., Healthcare Effectiveness Data and Information Set [HEDIS]) and "defining the acronym" for their staff, i.e., explaining what it means to become a PCMH. This difference in focus suggests that, although staff education was a need identified by both demonstration and comparison sites, demonstration sites targeted a deeper level of meaning and understanding than comparison sites. This may be a reflection of the larger theme, discussed elsewhere, of comparison sites being at an earlier stage of implementation than demonstration sites. Within such an interpretation, the educational activities of comparison sites were still focused on building the foundation of general or shared understanding of PCMHs at their site, while demonstration FQHCs had moved beyond that stage.

Comparison sites did not mention any specific strategies or facilitators that helped them educate staff about PCMH.

Exhibit A10.2. Summary of Challenges and Strategies Pertinent to Educating Providers and Other Staff on Changes

Type of Challenge	Specific Example	Specific Aspect of PCMH that Affects Challenge	Specific Aspect of FQHC that Affects Challenge	Solution Strategies or Facilitators that Reduce or Resolve Challenges
Educating providers and other staff on PCMH changes	• Lack of time and opportunities to provide or participate in staff education • Reluctance to engage staff and providers about PCMH changes early in the process	• PCMH processes involve many changes, which increase need for education • PCMH methods may seem similar to current practices or other recent practice improvement initiatives, so it is important to distinguish them	• Perceived lack of time for education • Large sites or sites with high turnover require more frequent/ regularly scheduled training to ensure all staff receive it • Concern that clinical staff already have enough to do without the burden of being involved in the planning stages of PCMHs	• Systematic and incremental education • Explaining the "why" • Peer education and group learning • Involving providers early to preempt resistance that might be encountered through misunderstanding of PCMH practices

SOURCE: RAND analyses of qualitative interviews from demonstration and comparison FQHCs.

Characteristics of FQHC Users

Challenges

Barriers to care among FQHC patients. At follow-up, FQHC demonstration site interviewees discussed the ways in which they perceived patient characteristics and behaviors as a challenge to their ability to implement services that define the PCMH model of care (see Exhibit A10.3). Site leaders described resource barriers (e.g., lack of transportation, lack of insurance, work schedules, caregiving responsibilities), recurrent patterns of self-referral and/or use of emergency rooms, preferences for walk-in care, and a cumulative lack of prior preventive care in association with longstanding unmet medical and often social needs. Respondents believed that these characteristics were particularly prevalent within FQHC populations and these patient characteristics made patients more difficult to serve.

> A lot of our patients, they really don't think about the chronic things. They only come in when they're hurting. . . . We're still struggling

> through that, in educating the patient on the importance of coming in for their screening exams, following up on our orders and recommendations.
>
> For those patients who are insured and they have more finances and more resources, patient-centered medical homes would be no problem for them. But for our population of patients, it's more difficult to get them to buy in [to PCMH].

Facilitators and Strategies

Patient characteristics were not linked to facilitating general change management.

Insight from PCA Leaders

Patient characteristics were not mentioned as a challenge or facilitator of practice transformation by PCA leaders.

Experience of Comparison Sites

Patient transience impedes PCMH establishment. Both comparison and demonstration site respondents talked about the socioeconomic circumstances of FQHC users as being a challenge when implementing a medical home model. Comparison sites tended to focus on the challenge of contacting patients due to patient transience (e.g., disconnected phone numbers, outdated mailing addresses). Comparison site personnel did not mention the issue of habits or culture of health care utilization among FQHC patients as an obstacle to PCMH, which was a prominent theme within demonstration site respondent comments.

Patient characteristics were not mentioned as a facilitator of PCMH implementation by comparison sites.

Exhibit A10.3. Summary of Challenges and Facilitators Pertinent to Patient Characteristics

Type of Challenge	Specific Example	Specific Aspect of PCMH that Affects Challenge	Specific Aspect of FQHC that Affects Challenge	Solution Strategies or Facilitators that Reduce or Resolve Challenges
Social and economic characteristics of patients contributed to low adherence to traditional treatment recommendations	• Patients' caregiving duties, work schedules, and transportation options contribute to missed appointments • Patients use medical care to treat acute conditions, rather than for prevention (as recommended by primary care model)	• Focus on preventive care runs contrary to patients' usual experiences and use of health care system (i.e., for acute care) • Being encouraged to remain in contact with medical caregivers may result in more appointments and referrals, which may be challenging for patients whose jobs and family responsibilities limit their ability to take time for their own medical care	• Among Medicare beneficiaries, FQHC users are more likely to be indigent than Medicare users of other primary care clinics	• Not reported

SOURCE: RAND analyses of qualitative interviews from demonstration and comparison FQHCs.

Leadership Support

Challenges

Leadership underestimates of resources needed for PCMH transformation. Respondents from demonstration FQHCs sometimes perceived a lack of leadership support for PCMH transformation because site leaders did not always allocate enough staff time and other resources to the effort. Respondents also reported leadership misunderstanding or oversimplification of PCMH transformation, which led to them to underresource the effort.

> The upper leadership wanted us to do it for the right reason—and, of course, for the monetary value, as well. I don't think there was an understanding of how long and tedious it actually takes to submit everything. It was like, "Well, you just push the button." Uh, yeah, right. You sit down and do it, then. You know?

> We had the support of our executive team. [But] I don't think our executive team fully understood the level of detail required around patient-centered medical homes . . . That's almost typical, you'll find that executive leaders want to look at the big picture and not the detailed approach. . . . They still don't know [how much time it takes]. I mean, we're going to pursue it for the rest of our sites and it's like, "Just get it done and get it done within the next three months," because they don't understand the amount of work that goes into even just putting in the application.

Facilitators and Strategies

Leadership support motivates staff. At both baseline and follow-up, respondents commonly reported the need for organizational commitment from senior leadership. Respondents commonly attributed their sites' success in implementing PCMH practices to leadership support. One respondent described how having PCMH practices endorsed as an organizational priority facilitated the work of enacting practice changes because staff broadly understood that transformation was being done at the behest of senior leadership.

Insight from PCA Leaders

Understanding by senior leadership of the transformational nature of PCMHs. PCA leaders described the importance of site leaders' understanding the work involved in PCMH implementation and being willing to provide the time to staff to make these changes (Exhibit A10.4). Lack of leadership support was identified as a challenge for the same reasons that the presence of leadership support was called out as a facilitator of PCMH transformation. Respondents described how adequate leadership support is necessary to equip the change team with the resources necessary to implement changes:

> I would say one of the main challenges is ensuring that the senior leadership is on board, knowing that this is a transformation process and not that we can just write up a couple of new policies and submit them and we get recognized as a patient-centered medical home or what have you, but really having the buy-in from the senior management and them understanding how deeply involved this whole process is.

> One you always hear is engaged leadership, which is true. It takes a lot of organizational support and empowerment of specific staff, be it quality staff or clinic managers. You have to both blend organizational credibility that, "This is a priority, this is something we're doing, it will be challenging because change is hard, but it's important for our patients." You need that level of executive commitment. And then you really, literally, need your leadership to make the time for providers and for quality, or whoever is leading the change piece, to figure out how it's going to work. Because there's some area of work you need to be doing

> there, and if people aren't given the space in their schedules to do that, then it's very hard.
>
> I think the leadership, leading it, not necessarily day to day but actually assigning it, supporting it, and then protecting the time that it takes to do it. There's hundreds and hundreds of hours put in by the coordinators to do this, because it takes committee work and it takes medical. It takes systems. I mean, just the Information Systems people, the IT people, it's really thousands of hours.

Experience of Comparison Sites

Comparison sites did not mention lack of leadership support as a challenge to practice transformation. However, similar to demonstration sites, respondents from comparison sites emphasized the importance of a supportive leadership infrastructure to facilitate the dissemination of PCMH concepts and values. Comparison sites cited examples of clinic leadership support, as well as one case in which consumer board members were very interested in PCMH, which catalyzed the site's engagement with practice transformation activities.

Exhibit A10.4. Summary of Challenges and Facilitators Pertinent to Leadership Support

Type of Challenge	Specific Example	Specific Aspect of PCMH that Affects Challenge	Specific Aspect of FQHC that Affects Challenge	Solution Strategies or Facilitators that Reduce or Resolve Challenges
Lack of leadership support	• Leadership failed to comprehend the amount of work involved with PCMH transformation • Leadership failed to support PCMH transformation in tangible ways (staff time, other funding)	• PCMH is a deceptively simple idea that seems resource-neutral but actually involves changes to many, if not all, components of clinical care	• Not reported	• Not reported

SOURCE: RAND analyses of qualitative interviews from demonstration and comparison FQHCs.

Integrating/Routinizing New PCMH Changes

Challenges

Need to reinforce and monitor implementation of new processes. One respondent described the difficulty of embedding PCMH changes into the staff's daily routine, using the example of team huddles. Respondents in the follow-up interviews raised an additional theme related to the challenge of integrating and routinizing new tasks: the need for ongoing reinforcement and monitoring of activities to ensure that newly implemented processes were consistently carried out and documented as required by NCQA (Exhibit A10.5). Respondents noted the value—but also the burden—of repetition, and the effort required to monitor activities so that staff could be reminded of new processes or retrained as needed.

> I think, for the most part, you have to tailor your message to your audience constantly and retailor it and recommunicate with your staff population to make sure that they understand and embrace it. And it's not one of those things that you can say, "Well, now we've implemented."
>
> We put a change out there, trained people, gave them the tools, run off to do another change, and they kind of said, "well, you're not looking." They'd stop doing things and then we'd start back over again, so that was a big lesson for us, to monitor, monitor, monitor.

Facilitators and Strategies

Simplify New Changes and Lower Staff Burden

Routinization by clerical staff alleviates clinicians of PCMH integration burden. At both baseline and follow-up, demonstration FQHCs discussed how PCMH processes

were adopted and maintained by clinic staff. At baseline, respondents focused mainly on efforts to reduce burden on staff by integrating and embedding the required tasks for many aspects of PCMHs—previsit preparation, chart review, documenting medications, care plans, patient education, etc.—into general practice operation without having physicians or other clinical staff feel like more work was being added.

A strategy to address the challenge of implementing and routinizing practice changes was to simplify changes and lower staff burden. For example, sites described efforts to support the integration of new tasks through built-in templates in the EHR or default workflows—for example, around rooming patients—that would remind staff and provide passive instruction on new care practices. In order to absorb new administrative tasks, such as increased documentation in the EHRs and referral tracking into the clinical routine without burdening providers, some sites described an active strategy of utilizing MAs and nonprovider staff for routine and administrative tasks, so that providers' time would be prioritized for patient care. Respondents felt that this approach was thoughtful and responsive to provider needs, and would result in sustainable implementation of PCMH practice changes.

> We pushed as much as we could and the manager and the nurse did a great job. The duties or the differences in the care model shifted from provider to the staff—whenever applicable, obviously. So we figured out different ways so at the end, ten things were different, let's say, in both clinics. Some the provider took on in, let's say, [one of our clinics]. And in the other clinic, the staff were doing different things. So for example, the care summaries or certain things, the staff was helping print those and so it was just a realignment of duties.

Monitor and Audit Implementation Changes

Need to reinforce and monitor implementation of new processes. Another facilitator of PCMH transformation that to some extent addressed the challenge of implementing and routinizing practice changes was the practice of monitoring and auditing changes. Several strategies were used to audit and ensure these changes were being implemented consistently and correctly across the clinic. Some sites used their EHRs or other reporting mechanisms to monitor data and changes.

> The other thing that our staff worked on this year was, instead of just telling people, they "fabricate" (for lack of a better word) a way to monitor performance, whether it be through the data that's stored in the electronic medical record or the other things, in terms of just having some quick and dirty type of report on the spot or faxing your information at the end of the week so we can keep track of what's going on.

Other sites created an actual monitoring workbook specifically for PCMH changes:

> We did come up with a monitoring workbook, which our staff is going to show you at some point today. That resolved a lot of the start and stop. We'd monitor monthly, assembled a workbook, and at the end of each fiscal year quarter, we'd present that to our board of directors so we can see what's changed, what's taking, what's not taking, where we're making improvements, and now we can set new goals. . . . We do continue to do that even though we've received our Level 3.

Insight from PCA Leaders

PCA leaders did not comment on challenges or facilitators of integrating and routinizing practice changes by demonstration FQHCs.

Experience of Comparison Sites

One comparison site made remarks about the challenge of integrating and routinizing PCMH changes that were mirrored in the comments of demonstration sites. Relative to the comparison sites, demonstration sites discussed this theme much more, elaborating on several themes that fall within this general change management challenge. Since this challenge of integrating and routinizing practice changes might become apparent only after practice changes were developed and implemented, mention of this challenge only by demonstration sites might reflect their having already implemented more changes than comparison sites. Their exposure to these changes would prompt them to have more to say about the challenge of supporting and encouraging their continued use.

As strategies and facilitators of integrating and maintaining PCMH changes, comparison site respondents also described efforts at integrating new PCMH-related activities in a way that reduced staff burden, such as creating default workflows in their systems that led clinicians through components of the patient visit, using nonprovider members of the care team for administrative work, and improving patient call routing. Comparison respondents saw the impact of these PCMH changes as freeing up time for the providers so they were doing less administrative work and could focus on delivering quality care to patients. Comparison sites did not discuss monitoring or auditing changes made as a strategy to ensure continued use of PCMH elements.

Exhibit A10.5. Summary of Challenges and Facilitators Pertinent to Integrating/Routinizing New PCMH Changes

Type of Challenge	Specific Example	Specific Aspect of PCMH that Affects Challenge	Specific Aspect of FQHC that Affects Challenge	Solution Strategies or Facilitators that Reduce or Resolve Challenges
Provider/staff overload with existing tasks	• Belief that it would be untenable to add more duties, preferred attempting to integrate new practices with existing routines	• Not reported	• Not reported	• Build reminders and routines into EHR systems to standardize practices • Use MAs and other nonprovider staff for routine and administrative work to reduce provider burden
Need for ongoing training, coaching, and monitoring to ensure practice changes are maintained	• Need to retailor and recommunicate • Belief that implementation will never be completed, that transformation will be ongoing	• Volume of practice changes and level of documentation required introduced many opportunities for staff to miss something	• Not reported	• Auditing documentation to detect when practices or documentation are veering off target

SOURCE: RAND analyses of qualitative interviews from demonstration and comparison FQHCs.

Competing Priorities and QI Requirements

Challenges

PCMH competes with other reform initiatives for clinical staff time. Demonstration FQHC respondents said it was challenging to find the time to work on PCMH processes and enact practice changes within a limited and already busy workday. Respondents described the difficulty of adding more responsibilities for providers and other staff, noting that the PCMH approach was only one of multiple reporting and regulatory requirements (e.g., meaningful use, HEDIS) (see Exhibit A10.6).

> As more things, not just patient-centered medical home but meaningful use, as we go into the various stages of meaningful use, and we're talking about ICD-10 [International Statistical Classification of Disease and Related Health Problems] coming down next year, so all those things. So I think that may affect in terms of, not just the provider, but

> our whole clinical teams' interaction with the patient, because we just don't have all that [many] staff because of our funding.

When discussing obstacles to provider buy-in, another respondent touched on "all the other initiatives."

Facilitators and Strategies

No specific facilitators or strategies to address competing priorities were discussed by site leaders.

Insight from PCA Leaders

All PCA respondents talked about sites' difficulties in prioritizing and/or accomplishing PCMH changes, given the other demands on their time, such as other reporting and licensing requirements, changes in state or federal programs, and the overall demands of running a health care organization. Although some respondents felt overwhelmed by the amount of change, other site leaders described the overlap and potential for efficiencies between the multiple QI and reporting obligations, such as the facilitators around "Extent of Change for PCMH," a theme that follows.

> [FQHCs] always have a lot of competing priorities. That's something that you'll hear if you talk to health centers. There was a lot of movement with [another health care initiative in our state]. That was a big, confusing year, so it was hard to rally people behind this internal change in an era where there was a lot of external change.

> There really just isn't [anything the PCA can do to help FQHCs get over the obstacle of competing priorities and timelines]. They have to kind of handle their—because each of these places that come in, HRSA has a timeline that they have to respond to certain things, the Joint Commission has a timeline that they have to respond to certain things, and everything else gets put on hold. And so it's just been circumstances in a lot of cases.

> There's so many projects and activities going on within the health centers that it's hard to devote time to every project that is demanding their attention . . . They also have a health center to run and see patients every day, and we expanded Medicaid and we had the highest number of Medicaid enrollees in the country, and changing EHRs, and you've got to recruit providers. So all those things happen every day, and so trying to carve out time for just this, is just a balancing act.

Experience of Comparison Sites

More-limited availability of resources in comparison sites. Comparison sites discussed similar themes to demonstration sites about the competing priorities present in the work of FQHCs that crowded out PCMH change efforts. However, comparison sites

seemed somewhat less resourced than demonstration sites. For example, comparison sites talked more about trying to implement PCMH processes with their existing (not expanded) staff resources and about how resource limitations affected their ability to hire. Another difference between demonstration and comparison sites was that respondents from demonstration sites discussed competing priorities as challenges for previsit planning, which respondents from comparison sites did not.

Comparison sites did not describe any strategies to address or facilitators that helped them to overcome the challenge of competing priorities.

Exhibit A10.6. Summary of Challenges and Facilitators Pertinent to Competing Priorities

Type of Challenge	Specific Example	Specific Aspect of PCMH that Affects Challenge	Specific Aspect of FQHC that Affects Challenge	Solution Strategies or Facilitators that Reduce or Resolve Challenges
Lack of clinician time to divert to learning about and adopting new care practices	• Concerns about clinician burden	• Lack of alignment between PCMH practices and documentation and other requirements for documentation; PCMH requires collecting more data	• Lack of funding/ resources limit staff availability	• Not reported
Finding time to work on PCMH implementation given other QI and reporting requirements	• Complaints about limited resources for additional administrative work	• Not reported	• Lack of funding/ resources limit staff availability • Additional reporting requirements of FQHCs	• Not reported

SOURCE: RAND analyses of qualitative interviews from demonstration and comparison FQHCs.

Electronic Health Records

Challenges

EHR implementation was a distraction to PCMH transformation. Demonstration FQHCs described several issues related to the integration of PCMH changes with EHRs (Exhibit A10.7). At baseline, respondents focused on EHR implementation, a theme that was also present, but to a lesser extent, in the follow-up interviews. In our baseline

interview sample, demonstration respondents acknowledged the increased efficiencies that could be gained by EHRs in concept, and discussed how important EHR systems were or how specific EHR features facilitated PCMH transformation and the recognition process because of their better ability to access patient information remotely and track improvements in quality of care, as well as their functionalities in coordinating care management and population management. But for many respondents, the state of EHR technology or the actual process of implementing EHRs was a challenge as they pursued becoming a PCMH. In some cases, EHR implementation occurred concurrently with participation in the demonstration, which proved a distraction to the organization and staff in attempting to implement PCMH changes. One respondent described concisely how the EHR changes were a distraction to PCMH changes:

> Because EMR and PCMH came all at the same time—which is, unfortunately, sort of the rollout that's going to happen with the other clinics—the providers were really much more focused on the EHR implementation.

Another respondent described the reaction to implementing EHRs nearly simultaneously with PCMH changes:

> I think [PCMH changes] just felt like another burden to them. And as I say, they still are kind of "deer in the headlights" over the EHR. And now that they're done with their first three months of EHR, now I'm going to really start going in and beefing up some of these PCMH concepts. Mostly what I've been working with them on is patient education and the handouts that are available in the EHR to make that easier for them. And so they're just starting to learn all of that, how it's related to the EHR. But it does feel burdensome to them.

Integrating EHRs for compatibility with PCMH workflows. A second EHR-related theme that was more prominent in follow-up interviews than baseline ones was the challenge of integrating or customizing the EHR system to be compatible with the workflows and reporting requirements of PCMH.

Other problems with EHR systems were also reported for specific components of the PCMH model, including poor usability, time-consuming data entry, interference with face-to-face patient care, inability to exchange health information with EHR systems of other facilities and providers, the need of additional add-on products or third-party solutions to customize EHRs, and degradation of clinical documentation.

FQHCs had to customize their EHRs to meet PCMH needs. Although most demonstration sites had an EHR system prior to PCMH transformation, many experienced major challenges in customizing the EHR system to meet the needs of the PCMH. Sites described the need to build or tailor functionality into the EHR system that would support their need for documentation of the specific aspects of care required by PCMH, templates for common workflows or care situations, referral tracking, and reports

to summarize and export patient data for both reporting and population management. Customization of reports and modules was tedious, time-consuming, and sometimes expensive if an outside contractor or third-party software was required.

> We spent a lot of time working on the templates, the electronic medical record templates, to where it [medical knowledge] wasn't necessary to determine what needed to be done—a lot of auto-populating for object, being, like, pap, mammogram, colonoscopy, things like that, so that the system would generate the information by itself . . . We wanted it to be foolproof. It was tough getting the template perfect, but we got to where it was coming out accurate and informing patients of what kind of Medicare they were due for; informing them of what is recommended for their age group in general, and then what they themselves were due for, and then encouraging them to come back in.

> We had to do quite a bit of adapting on the templates, work with our reminder system. I think our studies probably took us longer to figure out how we will monitor the data to see which providers are using it efficiently, which providers are maybe using the wrong note title and they look like they're not documenting. So, identify those education opportunities. Quite a bit of changes in that portion as well.

Many sites discussed the need to create trackable or reportable data collection and their processes for doing that, such as building a drop-down list or checkbox function in the EHR rather than relying on a "free text" note field. Like the quotation above, sites wanted the data entry to be foolproof as well as easy, so that it would not impinge on productivity.

> The second thing was around creating more templates and more workflows to train staff on how to document in the places where the information was needed to capture processes. So, we had a lot of staff members, as well as doctors, who did free texting, which you are not able to easily report out on information when it's just free text in the record. Although smoking cessation and counseling may have been done, if it was free text, when I get ready to say [one of our centers] does 80 percent of smoking cessation counseling, I can't pull a report if it's free text. So, that was one of the big changes in the EHR.

> I think a lot of it too, providers were doing it but they weren't documenting it properly to be able to capture that data, and we found that a lot with our measures and our outcomes. Providers were doing it but they just didn't know—they maybe document in a note, but when you do the report, unless you do a chart audit, you're not really going to pick it up. So we have a different section where we have an asthma action plan. A lot of it was the follow-through, the documentation, and that is, to try to train doctors to do all of the changes."

EHRs bring challenges to PCMH care coordination objectives. Challenges related to EHRs often affected the adoption of other care practices. For example, being able to generate concise reports for previsit planning or reference progress on self-management

goals during a visit are both dependent on key functionalities in the EHR. The PCMH care practices that were most affected by EHR challenges centered on care coordination, including referral and specialist tracking and hospital discharge follow-up.

> As far as referral tracking, our referral clerks try hard to track down those reports. They would keep spreadsheets. Before we had EHR, they would keep spreadsheets of all their outstanding referrals and would just all day long be calling for reports. Now that we're in EHR, we do have a task list that is used the tracking piece, but still, closing that loop is very, very difficult. And sometimes it has to be a provider-to-provider call just to get it tracked down. It's challenging to get that report.
>
> One of the challenges, I think, is the communications, we don't have the electronic communications with those specialists. So everything is paper, so that's a huge one. You're dealing with paper.
>
> We have three—well, really four—hospital systems in [our region]. . . . The University Hospital we actually have, we only access to their electronic record system. So we're able to access reports or discharge summaries. But they're not providing that to us. We have to go in and get it. With all the other hospital systems it's almost impossible, even when we call the medical records and request, they're the most famous for telling us we had to have the patient sign a medical release form in order to get the records. And to try to explain to them, "No, HIPAA says if it's between medical establishments it's OK."

Finally, limitations of EHR systems became obstacles to implementing a patient portal.

> [Our Health Information Specialist] said the technical logistics and manpower behind [the patient portal] is just more than we can take on at this time. And we're doing a lot of security checks. And though our EHR vendor says it's secure, we find areas that it's not. We deal with confidential patient visits, so that's been a big challenge.
>
> A: The language capabilities within [our EHR] are a real challenge for us. You know, there are some sites where greater than 50 percent of our patients have a language other than English as their preferred main language. . . . [But] anything that happens in the portal, anything that prints out, it's all very monolingual.
>
> Q1: Interesting. So, the patients are able to interface with the portal, even though it doesn't have a Spanish window to go to?
>
> A3: We've translated the button, so the face sheet that we created in the portal, you can label things. And so, we wrote those labels ourselves in Spanish. But there isn't a way, you know, "here's the link for the English portal and here's the link for the Spanish portal."

Facilitators and Strategies

Value of EHRs to smooth implementation of PCMH. Respondents in both baseline and follow-up interviews emphasized the importance of having a fully functioning EHR

system in place for a smooth roll-out of PCMH practices. Specifically, respondents described the ability of EHR systems to support clinical workflows of providers and staff members; documentation needs; and patient communication, referrals, and referral tracking.

PCMH workflows are facilitated by EHRs. Changes to EHRs were described as essential for implementation of other care practice changes, such as previsit planning, referral tracking, and open access (i.e., after-hours call service). A high-functioning EHR also bolstered the coordination and collaboration of care teams.

> It's very easy to figure out what's going on with a patient in our electronic medical record. I can get a picture in a second. And it's not perfect—like, the communication between, say, behavioral health and medicine still needs to be improved—but basically I get a pretty good picture of what's going on in just a second and that is because we're constantly improving the way people document, so that you can really share important information and try to do it quickly and with the least number of clicks and move along.

Along with changes to the EHR system, templates, and reporting, site respondents described the need to train users of the EHRs in appropriate ways of using them to accurately document patient care. When discussing changes made to the EHRs, one respondent explained:

> For example, if a referral was made, in the past we would address the referral but not really in a manner that could be reported out. And with the patient-centered medical home, we developed workflows where all the referral coordinators had to document in a specific location in the referral order that everyone was made aware of. So, if the call center staff wanted to know what information was obtained on that patient or what was needed for that patient for the referral, they will all go to the same location in the EHR. . . . The second thing was around creating more templates and more workflows to train staff on how to document in the places where the information was needed to capture processes.

Templates and "workflows" built into the EHR system had the added benefit of reinforcing clinical practices and standardizing care.

> We use a lot of templates. We have them available. We have order sets. So, we've just created things that make it—you know, we've implemented, we've incorporated our guidelines for hypertension, diabetes, and some other things into order sets, so that people are really clear on what the treatment guide is.

> [Our EHR] prompts the nurses to ask the questions. They're all prompted to ask those same questions. They're all prompted to talk to [the patient] about cigarette smoking and alcohol use and do their risk assessment. . . . They're all prompted to do all the same things and to ask the same questions and to provide the same services right now.

Lastly, several demonstration sites found IT expertise helpful as a way to tailor and add documentation functionality to EHRs.

> And the selling point is that we now have a system of alerts in the EMR that tells somebody, at any time, "this is who hasn't been screened," so that you can now screen them. But those alerts have to pull from a consistent place, so if it's not in that place, it won't pull. And we recently redid our whole clinician compensation package to say . . . "do you have our quality reports in the packet?"

> I'm assuming you know what your patients are taking and we're going to make it easy for you to do that, and the EMR has a nice way to do it, so do it. And when you do it, click the button that says, "I did it." So, these things made a really big difference.

Insight from PCA Leaders

EHR implementation was a distraction to PCMH transformation. According to the PCA respondents, sites that were newly implementing or had recently implemented EHR systems struggled with having the burden of that undertaking alongside the changes and requirements of PCMH practices. PCA leaders suggested that implementing an EHR system and the early days of a new EHR system create an all-consuming task for typical FQHCs. They felt that adding PCMH practice changes to an untested or unfamiliar EHR system was more than most sites in that situation could handle.

> I think the EHR had something to do with [sites that failed to attain Level 3 recognition], at least for the organization that has those six sites that are Level—well, I think only one is Level 1 and the others are Level 2, they were chosen for this project prior to implementing an EHR. And that was very clear to everyone involved. I mean, when they applied, they knew they didn't have their EHR. When they were chosen by CMS to be in the demonstration project, CMS knew they didn't have their EHR. But when you add implementing an EHR in with all these other things—that was just kind of the straw that broke the camel's back. And they've had a lot of frustrations. They've worked very hard and, to be quite honest, their team that has worked with this, they have one site at Level 1 and five sites at Level 2. And when we tried to encourage them to do an add-on and try to go ahead and get that Level 3 before the end of October, they are absolutely worn out. They really can't do it.

> Health centers who didn't have a solid EHR—like, we had some demonstration sites that didn't have an EHR fully implemented across their whole organization, so, they had reporting challenges. And there's been a lot of investment in [our state] in population health management infrastructure for many years, and so health centers that took advantage of that were in a very good place. And people who were not in areas where they've taken advantage of that were not as able to do it.

Experience of Comparison Sites

A greater proportion of demonstration sites than comparison sites recounted challenges with the EHR system in the context of PCMH transformation; only two comparison sites described problems related to EHRs. One site described challenges with implementing a particular EHR product. The other comparison site remarked that these systems are expensive and linked challenges with EHRs to limited resources of FQHCs. In addition, demonstration sites linked EHRs to care team processes and other practice changes, a connection that respondents from comparison sites did not comment on. A particular challenge focused on by demonstration sites was the burden of getting EHR systems to generate reports for NCQA. This theme was not raised by comparison sites, which may not have gone through the application submission process yet.

Exhibit A10.7. Summary of Challenges and Facilitators Pertinent to EHRs

Type of Challenge	Specific Example	Specific Aspect of PCMH that Affects Challenge	Specific Aspect of FQHC that Affects Challenge	Solution Strategies or Facilitators that Reduce or Resolve Challenges
PCMH requires a well-functioning EHR infrastructure	• Sites that tried to implement PCMH without a well-functioning EHR struggled	• Many aspects of PCMH would be burdensome without the record-keeping, tracking, and reporting functions of an EHR	• Not reported	• Well-functioning EHRs, when available, supported PCMH practice changes

SOURCE: RAND analyses of qualitative interviews from demonstration and comparison FQHCs.

Cultural Change

Challenges

Effort was required to change staff mindsets. Demonstration FQHCs emphasized the intentional effort that was required to change the culture or the mindset of clinic staff. Many FQHCs, particularly those with multiple sites, discussed how preexisting site or team culture could seriously affect how implementation occurred. To respondents, effective implementation often required being sensitive to existing site or team cultures, sometimes adapting PCMH practices to be compatible with local norms while still achieving the intended outcome (see Exhibit A10.8).

> I think the other thing was changing the mindset of the staff, and what I mean by that [is focusing] more attention towards a team and getting, for example, the huddle process where you're getting everyone together. And even before that, getting the documents, finding the charts of those patients who were coming in: the hypertensives, the diabetics, the relevant visits. So just changing their mindset about the new era we're in, about a patient-centered medical home and a team approach to the care of a patient . . . Changing the mindset of the staff in terms of looking at preventive as opposed to acute care.

> We are a geographically spread organization in, I think now, ten counties of [our state], with really diverse practices and populations. We've got inner-city practices, we have rural practices, larger practices, small practices, migrant farm worker practices. And historically, I think, as these practices were opened or absorbed into the organization, they had somewhat different cultures and should have somewhat different cultures, because they're serving different communities in different ways. And as we grow and do this kind of work, we need to bring a consistency to certain practices. And I think there's always this tension of how much standardization, how much consistency versus individuality, and kind of recognition of the uniqueness of practices. And I think our clinicians and our staff, certainly, I think appropriately, don't want to feel that they are being put into a cookie-cutter. And they shouldn't. And at the same time, in order to create the documentation and report the documentation and measure it, there are things that need to be done consistently. So, it's that kind of a tension.

Facilitators and Strategies

Patient care recognized by PCMH philosophy as focal point. Rather than view their organizational cultures as a drag on PCMH practice changes, some sites understood culture change as a positive part of their PCMH transformation, in which they had an opportunity to educate and persuade their staff that clinic goals and culture were aligned with PCMH philosophy. Respondents discussed attempts to change the culture of their organizations so that patient care became the focal point of care delivery, and everyone agreed that this approach would translate to better outcomes for patients.

> [We need to be able to] continue to simplify, not only in terms of PCMH but to be able to say "we're doing this because this is the way to do business," not because it's necessarily under the letters of NCQA, or under the letters of PCMH, or it's under the letters of primary health care, or "this is because we're an FQHC." I think that time [required] in terms of that explaining the why, [to] say, "this is good care and this is the way we should be doing business" . . . Those are the kind of things that if we don't explain now, we'll miss that opportunity to train the next generation of health care providers and get them in the fold in terms of this is the way health care needs to be delivered to provide the best possible care. . . . We've tried so many different things . . . we have too many letters in terms of TQM and PI or QA or that sort of thing. And

> people have gotten numb to *that* versus *this* is the best way to do it. And I think if we can continue to take that time, I think as an organization I know we'll be better, and I know as an industry we'll be better.
>
> The patient-centered medical home, to me, that conversation brought home that where we really need to start our conversations from is, "What does this person need?" Not, "What does this diabetic need?" "What does this *person* need?" [As a result of this change in emphasis] I've seen incredible improvement in our systems and also in our quality measures.

Insight from PCA Leaders

There were no comments from PCA leaders on the challenges or facilitators of culture change.

Experience of Comparison Sites

Benefits of responsiveness to local culture for multiple FQHC sites. The challenge of cultural change as an element of PCMH transformation was discussed in similar ways by demonstration and comparison sites. One theme that was present within demonstration site comments but was not heard from the comparison sites was the importance of individual sites (i.e., multisite FQHCs) having their own cultures.

Similar to demonstration sites, comparison sites described education-based strategies intended both to engage staff and build buy-in, at the same time as they fostered broader cultural change.

Exhibit A10.8. Summary of Challenges and Facilitators Pertinent to Cultural Change

Type of Challenge	Specific Example	Specific Aspect of PCMH that Affects Challenge	Specific Aspect of FQHC that Affects Challenge	Solution Strategies or Facilitators that Reduce or Resolve Challenges
Changing staff approach to patient care	• Shifting focus from acute to preventative care • Difficulty of changing throughout a site a long-standing approach to care	• Not reported	• Not reported	• Harnessing culture change and changing the approach to patient care as exciting, future- and patient-oriented • Educating or working with staff to communicate philosophy of PCMHs, so that they shift their broader perspective rather than getting stuck in the minutiae of individual practice changes
Needing to implement changes across multiple sites that had their own site norms and cultures	• Tension of consistency versus individuality in how changes are realized at different sites, with different care teams	• Not reported	• Not reported	• Not reported

SOURCE: RAND analyses of qualitative interviews from demonstration and comparison FQHCs.

Staff Turnover

Challenges

Patient population, other reasons contribute to staff turnover. Demonstration FQHCs described the need to train staff in PCMH care practices and documentation as a challenge exacerbated by turnover (see Exhibit A10.9). Maintaining empanelment and encouraging patients to build relationships with providers in the midst of turnover was a related challenge raised by respondents. In discussing the challenges of staff turnover, sites also mentioned several reasons for turnover, many of which related to being an FQHC. The complex and challenging patient population, lack of specialist access (for rural sites), and reliance on providers on J-1 visas, were all cited as reasons for turnover.

> If [we acquire an existing clinic and] bring their staff on board, we have to retrain them in a new way of doing things, and there's a lot of detail.

> Even for new people coming into one of our existing sites, it's a lot to learn. But you have to unlearn what you knew.
>
> We also had a turnover with some of the providers too, this last year. We had a number of new providers start in February. So, not only were we trying to redo everything or change a few different ways, but we also had new providers on top of it.

Facilitators and Strategies

A few sites benefited from having a consistent, stable provider and staff base at their facilities. Although this respondent did not explicitly link staff stability and ease of hiring to facilitating PCMH, lack of turnover helped this site avoid the challenges of turnover faced by other demonstration FQHCs:

> Three different providers were here before I arrived and part of the reason we came here to work with this organization is they had a very stable provider base. And it's an easy place to recruit.

Insight from PCA Leaders

Turnover requires getting replacement staff up to speed on PCMH processes. Provider turnover and other patient-facing staff turnover was noted as a challenge by one respondent group that discussed the time required to get new staff up to speed as time taken away from transformation efforts.

> There's a lot of turnover in health centers in [our state], which I think, talking to my PCA peers, it was different than other states. So, you'd have people come on, like, every year. And they wouldn't know about the APCP demonstration until they had to do the RAS six-months score, so that would set them back.

Turnover of key leads impedes PCMH transformation and PCA support. Several respondents described how changes in the leadership or change team at sites were obstacles to PCMH implementation *and* to the ability of the PCA to work effectively with the site.

> One thing immediately jumps to mind . . . is staff turnover. If you've got the project lead at a health center who, for whatever reason, is no longer at that health center after a year, two years, of working toward the project, unless you get somebody who is ready to jump into that saddle midstream, it's very difficult to play catch up.

Experience of Comparison Sites

The challenges of provider and other staff turnover were similar across demonstration and comparison sites. Respondents at comparison sites did not discuss staff turnover or stability as a facilitator of PCMH change.

Exhibit A10.9. Summary of Challenges and Facilitators Pertinent to Staff Turnover

Type of Challenge	Specific Example	Specific Aspect of PCMH that Affects Challenge	Specific Aspect of FQHC that Affects Challenge	Solution Strategies or Facilitators that Reduce or Resolve Challenges
Staff turnover	• New staff need intensive training and education about PCMH and specific care practices that are not common practice	• Detailed workflows and uncommon approach of PCMHs require training or retraining new staff	• FQHCs experience higher provider turnover than other primary care settings	• Not reported
	• Provider turnover erodes empanelment and continuity for patients • Turnover of leadership or change team can delay PCMH implementation	• Provider continuity is a central tenet of PCMH practices		

SOURCE: RAND analyses of qualitative interviews from demonstration and comparison FQHCs.

Extent of Change for PCMH

Challenges

Extent of change for PCMH is large. FQHCs also identified as a main challenge the fact that "a lot of change is required for PCMH." (See Exhibit A10.10.) Put differently, a respondent at a follow-up interview said, "No one tells you until you go through it how much it would definitely change the clinic." Respondents also described the struggle with coordinating all the newly required activities—the volume of changes required by PCMH were sometimes overwhelming to patient care staff.

> Yeah, in the beginning it was just too much, because I personally had to go down the line and make like a cheat sheet, you know, for us to have everything in place at the end of the day. Because you go down that progress note and you have your previsit planning done and at the end of the day you realize, "Oh, this [patient assessment] form wasn't filled out.

> This person didn't get the care plan." So, I had to go down and do a cheat sheet and have each nurse keep a cheat sheet at their desk. This way, everything is covered at the visit. So it's really challenging.

Related to the extent of change required for PCMH status, two sites focused on the limited timeline for implementation as a challenge to transformation. However, these sites also experienced turnover in the change team and lack of timely leadership support. The limited timeline imposed an additional constraint that they found challenging given their circumstances.

Facilitators and Strategies

PCMH implementation abetted by practice changes already under way. Some respondents at demonstration FQHCs mentioned efforts that were already under way prior to the start of the PCMH transformation that facilitated the implementation of PCMH changes. These were mostly other reporting measures that aligned with PCMH practices and therefore components of PCMH that were fulfilled ahead of the demonstration. Having prior experience with the application process—for example, demonstration sites that had already applied or achieved some level of NCQA recognition—was also mentioned as being helpful to demonstration FQHCs.

> [Our FQHC] had, over the past years, dabbled in quite a few of the [PCMH practice change] areas because we did projects on redesign and a lot of work around chronic disease. So if anything, I think [PCMH] is a model that pulls all of those things that we had done in the past and participated in, into somewhat of a comprehensive model, because when I started really looking at those standards and delving into them, I said, "Hey, this sounds like access and redesign and chronic disease management, and this sounds like people just pulling pages from a variety of different models and pulling them together." . . . The team concepts of pulling together a group of individuals that were providing care to a group of patients and looking at population health, those things were not unusual to us.

> Well, of course they intersect, you know, UDS and PCMH, meaningful use, they all overlap and intersect. And here in our organization, they all kind of started at the same time. . . . Looking at our UDS measures or some of the internal processing measures that we've chosen as an organization, PCMH really does align with that in a very generic way. You know, if we have all of our ducks in a row with the reminders that are available for patients, and using a registry to catch patients that haven't been seen. . . . All of the elements that are entailed into PCMH really help if we're using them appropriately, monitoring them, making sure that the documentation is there. Ultimately it will definitely increase our overall performance within the organization. It's still figuring out how to get the two aligned [that is a challenge].

> We had focused so much—[on other efforts] very similar to PCMH standards and factors and elements in [other population management

> initiatives]. We could see the benefit, as I was telling you. . . . so we wanted to roll it out to all our patients.

Insight from PCA Leaders

FQHC organizational structure is conducive to PCMH implementation. PCA leaders discussed how many FQHCs already have care practices in place that are consistent with PCMH. One PCA leader noted that FQHCs are notable among primary care settings in that it is not uncommon for them to have PCMH certification. Respondents generally felt that the organizational culture and structure of FQHCs is conducive to PCMH implementation.

> I think, as a national indicator of quality I notice in [our state], through that HRSA funding and through the CMS demonstration funding, because I track recognition, I mean, health centers and Kaiser are primarily the provider network who are formally recognized at a national level as being patient-centered medical homes. There's not a lot of private providers, and a couple of Army bases. But that says something to me about the infrastructure in health centers.

> Health centers have used team-based care since they started, or at least for the last 25 years, and so while we are fine-tuning it and getting better at it, being smarter about it, using EHRs, I think the concept of a health center mirrored the PCMH so closely that if you told a patient, "Oh, did you know that your health center is PCMH recognized?" they wouldn't have a clue what that means. I don't think it's as obvious to the patient. Maybe things got a little better or a few more services, but you always hope that as time goes on we get better at doing stuff that we're trained to do.

> [For NCQA recognition,] I think they had to change their same-day [access], kind of how they did that a little bit, but, for the most part, most of them had extended hours. We have to do a lot with HRSA, so a lot of those measures that have to do with demographics and what the chart has to have in it, some of those things we really are at an advantage, and even the clinical quality part of it, I think that's what you see, they're in a much better position than a private doctor's organization would be.

Limited timeline for NCQA submission. With regard to the limited timeline for NCQA submission within the demonstration, PCA leaders reported that this requirement created tension at some sites between their desire to complete implementation or improve their processes and CMS's "push" to have sites submit their applications for NCQA recognition.

> I think people see those dollars . . . and said, "Hey, sign me up!" But this project was fairly time-intensive, it was fairly aggressive. It was not extremely well-organized early on. I think towards the end, everybody kind of got into a good pattern, but it took a while. And then of course, there was that push to submit, submit, submit. And health centers just kept saying, "Why am I going to submit when I know I am not going to

> hit Level 3? Then I have to do a second application and it's going to cost me more money to get to Level 3." So it was kind of that tug between the push to get it submitted and the health centers saying, "No, I'm not ready."

Experience of Comparison Sites

Comparison sites did not discuss the extent of change required for PCMH as a challenge or facilitator.

Exhibit A10.10. Summary of Challenges and Facilitators Pertinent to Extent of Change Required for PCMH

Type of Challenge	Specific Example	Specific Aspect of PCMH that Affects Challenge	Specific Aspect of FQHC that Affects Challenge	Solution Strategies or Facilitators that Reduce or Resolve Challenges
Extent of change required for PCMH	• Overload of clinical staff with additional tasks in new workflow	• Not reported	• FQHCs experienced with care team model and other components of PCMH practices	• Having practices in place that were already consistent with PCMH reduced the amount of changes required
Aggressive timeline for demonstration project	• Limited time to complete all PCMH changes • Tension between submitted NCQA application on time and waiting until all changes had been implemented	• Not reported	• Not reported	• Having practices in place that were already consistent with PCMH made timeline more realistic

SOURCE: RAND analyses of qualitative interviews from demonstration and comparison FQHCs.

Lack of QI/Change Capacity

Challenges

Staff quantity and skills not always sufficient to support transformation. Respondents from demonstration FQHCs discussed how the fiscal and human resources at their sites were not always sufficient to support transformation (see Exhibit A10.11). In some cases, not enough staff were available, both to support all the care practices involved with PCMH transformation and to guide and implement practice changes. In

other cases, the staff tasked with new PCMH practices—for example, population management—had to develop skills in software and analysis.

> Actually, manpower in general [is a major challenge]. I think pretty much all of our staff wears multiple hats. Like, we don't have a referral coordinator that just does referrals: she does lots of other things. So I think it's just time. And like we said, we're small clinics. Like, one of our clinics has four staff members, including the provider. So it's just hard to get all the stuff done with limited staff, I think.

> I got the software in December of 2013. It took me a while to figure it out, because you've got to remember, I'm a nurse. So, it's like, what do I know about it? . . . So, it took me a little bit, like a month or so, for sure. So then I had my first dashboards up.

> [CMS] should understand that this is just a tremendous process. And, especially with FQHCs, we don't necessarily have the resources and the funding to necessarily move at a rapid pace as those in the private sector and so forth who have greater resources.

> Number one [most challenging aspect of PCMH] is the cost, the sheer cost of it, financial cost. With CMS, I mean, they paid for the application, but financial cost also goes into staffing. We've had to hire new staff. As I said, we've hired four case managers. We've hired referral clerks. So staffing is another thing.

Facilitators and Strategies

Larger organizations are in a better position to support change. One site described the infrastructure for learning and QI at their site. The respondent attributes the site's capacity for change and transformation partly to the size of the organization, which makes it possible to support so many change management resources in house.

> I think we are a natural collaborative. You know, we have some central leadership and we have our individual sites, with people who are really engaged and dedicated and making things better. So a lot of what we did was create change packages or . . . people would figure out how to make it work, doing PDSAs in their sites. We'd share best practices across the organization . . . And we all recognize that we've got a lot of work to do. But the point [we're] making . . . is that this neat stuff that you're seeing exists because we're big enough that we have a director of QI. We're an organization that wanted to hire a chief of clinical quality and training at the executive level, at the CMO [chief marketing officer] level, and that we have an informatics team that's building all these reports and we have an EMR developer and we have EMR trainers and we have a clinical staff training institute that trains all of our clinical staff. And we have an administrative staff-training institute that trains all of our staff. And we do all this stuff because we think it's important and because we can.

Insight from PCA Leaders

Conversely, smaller or rural FQHCs face obstacles to transformation. PCA leaders discussed the need for capable staff to work on PCMH implementation, and how—often at smaller or rural sites—having adequately skilled staff was an obstacle to practice changes.

> In rural health centers—NCQA is not really a rural-friendly model—it's hard. . . . I just got some thoughts from [one of our rural coaches]. They were specific, like just gathering data reports when you have a really small population was hard [for rural FQHCs]. And then there's fewer staff to work with there, so in rural areas you do, like, the IT who's also the nurse case manager is leading PCMH because there's just not that many people. So, there were distinct differences in what worked in rural versus urban.
>
> All the health centers are really struggling with capacity, as well as competing priorities.
>
> The centers that struggled probably had more lack of resources. So when you really don't have the staff to do everything that you really need to do, you're just not . . . they don't respond real well to our offers [for technical support], because they don't have the staff to do the work.

Experience of Comparison Sites

Comparison sites raised themes similar to those raised by demonstration sites on the topic of capacity for implementing change at their FQHCs, focusing mostly on staff capacity or capabilities, and funding to support change efforts. However, while demonstration sites raised the issue of staff not having the right skill set, comparison sites seemed more focused on the lack of staff time and attention for PCMH transformation. Comparison sites did not discuss strategies they used to address this challenge.

Exhibit A10.11. Summary of Challenges and Facilitators Pertinent to QI/Change Capacity

Type of Challenge	Specific Example	Specific Aspect of PCMH that Affects Challenge	Specific Aspect of FQHC that Affects Challenge	Solution Strategies or Facilitators that Reduce or Resolve Challenges
Lack of QI/change capacity	• Insufficient staff time dedicated to effort • Staff lack needed skills (e.g., data analysis) to effectively	• PCMH model is monitoring-intensive, which requires nonclinical time • PCMH activities and NCQA application	• Limited staff resources to devote to transformation, especially at small, rural sites	• Not reported

Type of Challenge	Specific Example	Specific Aspect of PCMH that Affects Challenge	Specific Aspect of FQHC that Affects Challenge	Solution Strategies or Facilitators that Reduce or Resolve Challenges
	implement PCMH	depend heavily on EHR, automation (e.g., reminders, flags), and reporting results, which require technical expertise		

SOURCE: RAND analyses of qualitative interviews from demonstration and comparison FQHCs.

Change Team Challenges

Challenges

Inability to enlist or maintain effective change team leaders was a challenge to change management (see Exhibit A10.12). Turnover within the change team and competing workplace priorities for change team members were two examples given by respondents of how struggles of the change team translated into challenges to the overall implementation of the PCMH model.

> I think the thing that we've struggled the most with is just the way to try to get processes documented and consistent. And I think that we've come a long ways and, without having somebody to drive the force every day, that was very difficult.
>
> We'll have our staff meetings, but because we don't necessarily have others besides [teammate] and myself and a few other leaders within the organization, you know, constantly on the team. It's difficult, because there are other responsibilities. We can't spend the time that I think really needs to be spent with those that are doing that direct care. So, they get that education in pieces and a big program project that calls for change, you really need to constantly be there reminding and educating and monitoring, and that's very difficult.
>
> Well, I think that one of our biggest issues with our organization was that they submitted the application at the beginning of the demonstration, but the people who did it were kind of the grant writers and a couple of other people that were not clinical. And so then, it kind of wavered a little bit, because no one really knew exactly what to do with it and no one really knew exactly who should spearhead the project. So the truth of it is, is that it probably waffled for about a year and a half with nothing being done. Then it finally landed in my lap or I offered to spearhead the project, because I felt like I had already have been working a lot on consolidating the practices between the clinics, making sure that our quality measures were good, that I worked in a clinical setting and also

> was familiar with the ways in which we could modify our EHR to facilitate these changes. And then also, because I've worked in most of the clinics at multiple times at this point, I kind of knew what the challenges would be with the different attestation sites. So then we started that, we developed a really great PCMH team.

Facilitators and Strategies

Characteristics or composition of the change team were mentioned by only one site as a facilitator of general change management, but the respondent referred to similar themes of adequate and appropriate staffing that demonstration sites more often experienced as a challenge.

Insight from PCA Leaders

Staffing a change team with the right kind of people. PCA leaders commented on the importance of staffing the change team with the right kind of people within a clinic.

> I think you can have, like, an office staff [person], like a clinic manager or a quality staff [person] . . . Just [having a] compliance [staff person lead PCMH efforts] is hard. It was hard when someone was a compliance officer and then tasked with this, so that I know is a challenging fit.

> One of the biggest barriers . . . is the type of people who were named as the leads, you know, the person trying to push this along. [One] was a nonclinical person who, bless her heart, has been working really, really hard on trying to get all of this together, but she's not clinical. And so she's really having to depend on other people, who have too many other things to do, to get her the information that she needs in order to submit. And so it's kind of a catch-22 for her.

Experience of Comparison Sites

Only one comparison site mentioned this theme, and the content of the site's comments seemed similar to what was discussed by demonstration sites, such as how the dynamics and duties of its change teams affected PCMH transformation.

Exhibit A10.12. Summary of Challenges and Facilitators Pertinent to Change Team Challenges

Type of Challenge	Specific Example	Specific Aspect of PCMH that Affects Challenge	Specific Aspect of FQHC that Affects Challenge	Solution Strategies or Facilitators that Reduce or Resolve Challenges
Stability of change team	• Turnover within change team delays	• Not reported	• FQHCs experience higher than	• Not reported

Type of Challenge	Specific Example	Specific Aspect of PCMH that Affects Challenge	Specific Aspect of FQHC that Affects Challenge	Solution Strategies or Facilitators that Reduce or Resolve Challenges
	transformation efforts		usual turnover	
Sufficient protected time for change team members to devote to transformation	• Lack of protected time and competing priorities divert change team attention from transformation	• Not reported	• Not reported	• Not reported
Effective change team composition	• Wrong types of people on change team stymie change efforts	• PCMH transformation requires changes throughout the organization (e.g., clinical, IT, administrative)	• Not reported	• Combination of clinical and nonclinical staff, including some—but not all—clinician leaders noted as important • Leadership support and influential champions lend authority to the change team

SOURCE: RAND analyses of qualitative interviews from demonstration and comparison FQHCs.

Aligning PCMHs with Other QI Programs and Requirements

Challenges

See competing priorities and QI requirements (above).

Facilitators and Strategies

Alignment of QI initiatives is improving and helpful. A few respondents discussed successful overall strategies for aligning and bringing coherence to the many QI initiatives, measurements, and reporting requirements with which a typical clinic must contend. This alignment is reflected in the types of initiatives and programs in which an FQHC focuses its efforts, as well as in how an FQHC attempts to organize and manage the quality measures used to monitor implementation and report on adherence of new practices (e.g., through a performance-monitoring "workbook" that cross-walks metrics for different initiatives).

> So, compared to 15 years ago when I started working on quality reports, the alignment among programs is really helpful. We have a lot of patients who are uninsured, so if we only target our insured patients with interventions, then we're creating disparities, which just goes against everything we stand for. So, again, like with the health homes, we say that we're not going to carve out a population based on insurance and do things just for one population. So, we'd have, like, ten different programs and then who'd know who was doing what. So, our challenge is to find things that create improvement and meet the needs of our patients that we can really do across all of the relevant population. So, the health home is one where, to meet the standards of the program, we have to use Medicaid patients and provide the services to them. But we are struggling as an organization with what model we can employ that will let us apply that to all our patients and still be able to afford it. *So, the alignment of quality indicators is much greater than you might think and it's very helpful.* The challenge might be that even though the measure by name is the same, sometimes the definition of the measure is a little bit different. So we try to find the most reasonable common denominator and apply it. [*italics added*]

> So our quarterly performance-monitoring workbook [contains] not only our medical home data but also our meaningful use data, our UDS data. Now that we're in the new fiscal year, I'm going to include data for our grants. The table of contents became such a struggle because, if I'm only working on meaningful use, I'm going to have to know which standard that's in. That wasn't going to work. So [our quality analyst] came up with the idea of a very dynamic table of contents that *allows us to see, OK, so this is meaningful use and PCMH, this is GPRA [Government Performance and Results Act] and meaningful use and PCMH, this is our MSPI [Methamphetamine and Suicide Prevention Initiative] grant and UDS*. Depending on what you want, you're interested in, you can look up measures by monitoring topic or by type of initiative, such as UDS or PCMH standards. [*italics added*]

Physical Facility

Challenges

No respondents described ways in which physical layout or size of their facility was a challenge to PCMH implementation (Exhibit A10.13).

Facilitators and Strategies

Facility arrangement could be conducive to PCMH implementation. Several respondents noted how the physical arrangement of their sites was conducive to implementing PCMH. Keeping care teams together was mentioned as a way to ensure that staff communicated and coordinated around patient care. Collocation within the same building or across the street from specialty providers, such as behavioral health, was

mentioned by another site as a way that physical layout of their practice helped transformation. A few sites that had recently constructed new facilities described how the building project was used as an opportunity to incorporate PCMH principles into the facility design (e.g., collocation of provider teams, other care staff, and related services; patient flow; waiting room layout).

> The care team, our clinics are small, so the staff has to work together all the time, as opposed to having a large facility, where we're spread out.
>
> When we built the new building and have a promotora [i.e., Spanish-speaking lay community health care educator] in each hallway, then people knew they were a promotora. And we introduced them, like, "this is the promotora who's a part of the patient care teams for this doctor and this doctor."

Insight from PCA Leaders

PCA leaders did not discuss this theme.

Experience of Comparison Sites

Comparison sites did not discuss this theme.

Exhibit A10.13. Summary of Challenges and Facilitators Pertinent to Physical Facility

Type of Challenge	Specific Example	Specific Aspect of PCMH that Affects Challenge	Specific Aspect of FQHC that Affects Challenge	Solution Strategies or Facilitators that Reduce or Resolve Challenges
Communication of care team among themselves and with other providers	• Not reported	• Not reported	• Not reported	• Collocation or close quarters facilitated communication within the care team and with specialists

SOURCE: RAND analyses of qualitative interviews from demonstration and comparison FQHCs.

Other General Changes

Challenges

All general change management challenges discussed by the demonstration and comparison sites fell within the themes outlined above.

Facilitators

Other facilitators of general change management processes, each mentioned by one site, were adapting PCMH practices to site context, institutionalizing PCMH practices, and engagement of external partners to catalyze changes. In this last theme, external partners included community members, health plans, and hospitals, all of which were described as becoming increasingly interested in partnering in health and wellness efforts.

Insight from PCA Leaders

Inconsistency between transformation of care and NCQA application. In addition to comments on the themes discussed above, one PCA leader raised an additional change management challenge, which was experienced by some demonstration FQHCs. The respondent thought a central challenge to PCMH transformation was how the very high-level, theoretical shift in the way care is delivered, as represented by the PCMH model, was paired with the tedious and time-consuming NCQA application. This respondent saw the negative staff response as threatening the likelihood of sites embracing PCMH as more than just a reporting or monitoring exercise.

> There's some [FQHCs] that we're working with who made it to Level 3 but the only staff person our coach has ever worked with has been their compliance officer or a beleaguered quality director who is like, "I hate PCMH because I hate doing these reports and I have to beg people for this [documentation]." And there's no context of why this is happening. It's all just tied to a grant report. [At some sites] the priority was not about tying it to a larger context. It was about meeting this immediate deliverable.

A11. Qualitative Detail for Specific PCMH Practice Change, Challenge, and Facilitator Themes

This appendix provides qualitative detail and illustration of the major, specific PCMH practice changes emphasized by demonstration FQHCs, grouped in order of the six domains of the NCQA 2011 standards. The appendix corresponds to the discussion in Chapter Seven. We first describe each practice change, then we describe the *challenges* and *facilitators* associated with the practice change as recounted by site leader respondents. Experiences of comparison sites and any comments by PCA leaders on these themes are also included in each section. The discussion of each specific PCMH practice change concludes with an exhibit summarizing the major challenges related to the theme, particular features of PCMH or FQHC status that affect implementation of the practice, facilitators around the issue, and facilitators or strategies used to implement the practice or overcome challenges.

NCQA Domain One: Enhance Access and Continuity

Care Team and Other Staffing Changes

NCQA Domain One focuses on enhancing access and continuity of care (see Exhibit A11.1). A key mechanism for providing continuity of care within a PCMH is the care team, as well as the individual staff members who contribute to work across care teams.

Practice Changes

Organization of care teams and other staff. Respondents at demonstration FQHCs described the changes they made to the organization of patient care teams and other staff. Site respondents said that roles shifted or were expanded within the care team, and, in some instances, new staff were hired to support PCMH requirements.

Retraining staff for team-based roles. As duties within the care team changed, site respondents described retraining staff for new roles, while emphasizing a team-based concept of shared responsibility for patient care. Some site respondents described how they supported the professional development of medical assistants. They emphasize that retraining staff with a team-based focus translated into new tasks (e.g., use of an electronic medical record), new skills (e.g., blood pressure measurement and recording), new relationships (with staff newly interacting with clinical providers), and new enabling perspectives.

Adding new or reorganizing existing staff. Beyond the care teams, respondents from demonstration FQHCs described adding staff or reorganizing or retaining existing staff to increase their site's capacity to provide care coordination and patient education. Respondents used different terms for these roles. "Care manager," "care coordinator," and "patient care facilitator" were used for the role of coordinating care; "health educator" and "*promotora*" were used for patient education duties, as well as "patient care facilitator." Our analysis suggests that the roles and types of patient interactions assigned seemed similar regardless of the titles assigned. Demonstration FQHCs often discussed care coordination with referral and hospitalization discharge tracking, as staff responsible for these tasks often overlapped.

Nevertheless, most respondents expressed the need for more staff to complete these tasks. Many sites added staff to fill these roles. Other respondents talked about how they distributed tasks among existing staff.

> We also hired a quality assurance person and we hired case managers. We currently have four case managers. We hired extra clerical staff to help with the tracking of referrals and consults and labs and so forth.

> As part of the patient-centered medical home, we only have one patient care advocate and . . . she wasn't really being as effective, but we were able to get our administration to see the benefit of adding three more patient care advocates, who provide the follow-up and the one-on-one education for the patient outside the medical visit. They do all of our patient recalls, they handle referrals. So that was something that we expanded on.

> I think some of the nurses, or maybe floor nurses, were getting more into education, or the providers were recognizing all the things they had to do, really, to let the nurse do more of the teaching aspect of it.

> There's a couple of new positions but, for the most part, we're able to take the staff that we had and transition them from what they were doing into those teams. So we're not completely done with that, of course. But my phone nurses are RNs [registered nurses] and they will transition into a team in the next month and take over that care coordinator of that team.

> I think we've come a long way. When I first started, as a medical assistant in the back office, just our documentation and patient—I don't want to say patient care, but maybe patient involvement—has improved so much. It's really cool. . . . [like] notifying [patients] of lab results and confirming appointments [with them in advance of the appointment date]. Just tracking of things, reminding patients to get their labs done, reminding them that their kids need immunizations, self-management goals, that sort of stuff.

Site respondents also described adding staff and training existing staff to provide or increase their capacity for mental health care within the clinic. Many sites added staff (usually social workers), trained providers to do basic mental health services, or added a

behavioral health lens to primary care (e.g., addressing mental health issues as part of patients' overall care, conducting depression screenings).

Challenges

Learning to use a team-based care model. Site respondents described several challenges that they encountered as they tried to implement care teams as the functional organizational structure for how they delivered patient care. A leading challenge was learning to use a team-based model of care. The reconfiguring of the care team and redistribution of tasks within the care team required additional training, negotiation of roles and responsibilities, and changes to the clinical workflow. For example, for nursing and support staff to work successfully at the top of their license, substantial retraining and redistribution of tasks within the care team were necessary. The mindset of the care team approach also shifts the balance of power, emphasizing the cooperation and collaboration of the care team rather than a provider-driven patient visit. Taken together, learning to work within these new roles was sometimes difficult for members of the care team.

> Initially, some of our clinicians felt, "I have to give the visit summary, I can't delegate that to somebody else." And there was this give-and-take of who's going to do it. When we found that the clinicians were doing it, they, at the same time, felt that it really slowed them down. . . . Gradually, those clinicians found that they didn't need to do it and gave it up to their team members.

> Well, people become Swiss Army knives and they take on the additional duties. But here again, everyone has their role to perform. And that's what we started to identify. If there were gaps, we had to go back and continue to reeducate . . . we had to go back and continue to retrain.

> . . . then also, making it such that patient-centered medical home is a concept that medical records is completely on board with. . . . [I]t's not just the people who contact and one-on-one and on exam room patients, but that it's really pervasive in our whole organization. And I think we've got more work to do there.

> The MAs have and are taking a bigger role; a lot of it's based on those team meetings, the morning meetings or the huddle, whatever you want to call it. I still think that one of our strategic plans is to continue to look at our clinical support, our MAs, our LPNs [licensed practical nurses], and restructure what they are doing and what they could be doing even further. You know, some based on other things within the organization, a lot of it based on trying to continue to meet the requirements, the elements of patient-centered medical home, Joint Commission. You know, we have a lot of very educated staff [who] we're still not using to their fullest potential. There's been a shift, but I don't think we're quite there yet, where I would like to see them anyway.

Costs and staffing challenges. Some sites added staff to fulfill the responsibilities of the PCMH care team. In these cases, the cost and difficulty of hiring additional staff

represented a challenge. At sites that did no or minimal hiring to support PCMH, many discussed struggling to make do with existing staff.

> I think when we talk about the [previsit planning] huddles too, I mean, the huddles were when you have to tell the staff they have to stop and meet for five to ten minutes every day, the first thing they ask is like, "*When*? Are you going to give us overtime to come in early or stay late?"

In particular, sites struggled to provide care management for patients because of the lack of monetary resources to hire new staff or allow existing staff to devote time to this function. Respondents from demonstration sites often felt that the demonstration per-member-per-month payments were not sufficient to offset the cost of all the new changes and services made to implement PCMH. Because these funds were seen as insufficient, and with the hope of instituting a sustainable staffing model after the demonstration ended, sites tried to accomplish the goals of PCMH with existing staff resources.

> We tried to offload [care management from] the providers to utilize their staff in a different way. . . . [F]rom a job share perspective or from each discipline, it was just redistributing. But overall, if I look at all that's expected of every discipline, it was more. And was it overwhelming at times? Yes.

> A: The patient-centered medical home model is truly the way that I think we need to go for the future and I know that our senior leadership believes that as well. It's just [difficult] in that transition, while we're still being paid by HRSA for productivity and clinical outcomes to a certain extent—but it is still very much productivity-driven [the way we are currently working].

> Q: And in terms of care management, what support is there for care management in terms of what HRSA is giving you or your Medicaid reimbursements?

> A: Well, you don't get any. You don't get reimbursed for care management.

> We had to basically pull our RNs off the floor from what they were doing and dedicate them as care managers. So we had to fill some gaps with necessary labor needed on the floor, but we felt it was critical that they be identified to do this certain piece of work, the care coordination.

Workflow and information flow among members of care teams. Workflow and information flow were challenges to the smooth operation of care teams, such as the ability to use the EHR system during the patient visit and as a means to track referrals and follow-up. In particular, integrating staff from other disciplines (e.g., behavioral health, dental) or otherwise not central to the care team (e.g., referral coordinators, medical records staff) was a challenge to forming and maintaining functioning care teams.

Access to and communications with behavioral health services. Access to and communication with behavioral health services, an integral component to primary care

under the PCMH model, was a challenge for demonstration FQHCs. In response, some PCMHs embedded psychologists or limited license social workers into their clinics since they were not able to secure adequate access to full service behavioral health resources.

Facilitators and Strategies

Respondents from demonstration FQHCs reflected on the strategies or features of their sites that were conducive to forming well-functioning care teams.

Adequate physical space with design to enhance communication. Close physical proximity or collocation (i.e., sitting together in a "pod") was one facilitator of teamwork in that it fostered communication across team members, which led to closer relationships and enhanced trust. Some site respondents described close physical proximity as being the result of adequate facility space and intentional design, while others noted it was the consequence of being a smaller clinic, which forced teams to be in close contact.

> At the new building, it's much better, because you have your providers right there. You have your MAs or your LPNs right at the nurse's desk and then right behind them is the coordinator's desk. So they're all right there in the same pod, the core team is.

> Our clinics are small, so the [care team] staff has to work together all the time, as opposed to having a large facility, where we're spread out. And it's not like that where we are. So, I think the foundation for us was easier to build on.

EHR functionality that enhances communication and sharing across teams and service lines. In a related theme, some site respondents articulated how changes or functionality of the EHR contributed to increased communication and information-sharing across care teams and service lines, promoting optimal functioning of the care team.

> Something that we're doing is transitioning all the behavioral health providers into EHR, which will help in the communication and [provide] access to the records and everything.

> Well, we're only on one EHR so that kind of helps, so anytime that we put a new correspondence in, it's available to everyone, so we have quarterly staff meetings and so I have nurses in all of my sites and they were really my lead people in getting things done, so a lot of email and some conversations and then two quarterly staff meetings and just coordinating with them.

Setting clear expectations and roles for individuals and the team. Another strategy that facilitated transitioning to the PCMH care team model involved the composition and inner workings of the care team. Site respondents discussed "value added" in setting clear expectations and roles, as well as in matching skills and personalities within each of the care teams. Site leaders discussed how teams needed to

work well together, and how commitment and experience with coworkers both facilitated a positive dynamic and a productive team.

> So, we set aside a couple of hours for the team, the initial team, to get together to say, "OK, these are the expectations. Who's going to do them?"

> You have to match up people who get it, who get along well with each other, who speak the same "language," who basically kind of "marry" each other, for lack of a better term.

> Our providers have been here for a very, very long time. I've been here for almost 12 years. It's nice to have a very strong team of providers. I keep saying it's the best team I've ever had. It's not just the providers, it's the medical assistants, it's the front staff, it's the medical records. It's, as a whole, everybody, we all work together. Right, so we know each other's style, we know each other well, and we're like a family so it's really nice.

The composition and skills within a care team mattered, and what could not be achieved by combining existing staff was sometimes attained by training or retraining staff to fill new roles and/or work at the top of their license. Medical assistants, nurses, care managers, and patient educators were all specifically mentioned as key members of the care team that sites added or trained to ensure that the care team had adequate support. The cost of adding staff was listed as a challenge, but at the same time, site respondents described how additional staff or changing roles of staff were important to care teams' ability to work efficiently.

> When we added the second MA to the team, it really helped a lot. It helped the flow because one person could be "rooming"; the other person can be kind of checking to see "what do we need to do, what are some things coming up," so you're keeping those rooms full. The other thing is, you're building more of those relationships. And the third thing is, is that, we . . . some teams, had a scribe.

As the care teams learned to work together, some practice changes were particularly challenging. For example, site leaders encountered some skepticism and pushback from staff about the additional work and time required for previsit planning. Site leaders were concerned about implementing this practice consistently across care teams, but acknowledged natural variability in "what works" for a given care team or site. They described a strategy in which teams were given latitude to implement the spirit of a care practice in a way that seemed feasible at the moment. Management would then work with teams over time to improve and standardize the care practice, taking advantage of lessons learned from different teams.

> We kind of had some do [the previsit planning huddles] a little informally in the beginning and just kind of let them meet whenever they had time just to check in at first. And then we started structuring it a little bit more once they figured out what time worked best for them.

Experience of Comparison Sites

Practice changes. Similar to demonstration sites, comparison site respondents discussed sharing responsibilities within the care team, broad inclusion of diverse staff into the care team, and tools to support care team synchrony (standing orders, workflows, EHR templates). Respondents from two comparison sites seemed to suggest that care teams were still being formed, and/or not really implemented yet, a theme not found in the demonstration site interviews. Two themes that arose in the interviews with demonstration site personnel but not in comparison interviews were professional development ("training up") of MAs as a byproduct of the care team implementation, and care teams as self-organizing units that "norm" and determine or customize their own workflows. This suggests a trend toward more autonomy and shared responsibility for PCMH at demonstration sites.

Demonstration site respondents described using a combination of hiring new staff, assigning additional tasks to existing staff, and encouraging or supporting staff in taking on greater responsibilities (e.g., in the case of medical assistants). Comparison site respondents tended to focus on assigning additional responsibilities to existing staff, reflecting their remarks on competing priorities and financial resources, which indicated that they had done little to no hiring to support PCMH transformation. Because the demonstration sites seemed more likely to add staff to support PCMH transformation, it is noteworthy that they were also supporting the professional development of their staff (i.e., MAs), a technique that was not mentioned by comparison site respondents but that might be useful, given their resource constraints.

In both the demonstration and the comparison sites, the duties of the care manager/educator role varied widely, although the demonstration site interviews held more discussion of patient education as part of the role, perhaps related to the greater emphasis on self-management in the demonstration sites, as discussed later. In both comparison and demonstration sites, care manager/educator staff seemed to be well integrated into the care teams.

With regard to integration of behavioral health staff into care teams, demonstration site respondents made more references to behavioral health care and to what they have done to connect with and integrate these types of providers into their practices, including ways they have tried to integrate mental health into primary care.

Both comparison and demonstration site respondents discussed developing other roles and staff responsibilities through training and hiring. Demonstration site respondents, however, tended to be more inclusive of administrative (e.g., medical records) staff when describing their care teams. Demonstration site respondents also placed greater emphasis on training and retraining all clinic staff (i.e., clinical and nonclinical) to educate them about PCMH changes and to facilitate high-quality implementation.

Challenges. Comparison site respondents mentioned similar themes on the challenges of developing care teams as demonstration sites. Demonstration site respondents more often described challenges related to integrating front desk staff, mental health providers, and other administrative staff into the care teams. Both comparison and demonstration site respondents mentioned costs associated with staffing as a challenge to providing care management to patients.

Facilitators and strategies. The facilitators described by comparison site respondents for enhancing care teams were similar to those described by demonstration site respondents. Both groups discussed the importance of good rapport and clear, complementary responsibilities within a well-functioning care team to support efficiency and patient experience. Additionally, both demonstration and comparison site respondents identified collocation and building design as a facilitator to enhance better care coordination and collaboration with different service lines within the same FQHC clinic.

Exhibit A11.1. Summary of Challenges and Strategies Around Care Teams and Other Staffing Changes

Type of Challenge	Specific Example	Specific Aspect of PCMH that Affects Challenge	Specific Aspect of FQHC that Affects Challenge	Solution Strategies or Facilitators that Reduce or Resolve Challenges
Adjusting providers and staff to new tasks and roles	• Not reported	• Not reported	• Not reported	• Setting up clear expectations and roles • Training/retraining provider and staff to fill roles, work at "top of license" • Implementing team- and morale-building strategies (e.g., healthy group competition and incentives)
Implementing "huddles" and previsit planning consistently and meaningfully across teams	• Not reported	• Not reported	• Not reported	• Matching skills and personalities on teams • Training/retraining provider and staff
Reconfiguring EHR to support care team workflow	• Not reported	• Not reported	• Not reported	• Engage IT support and EHR vendors

Type of Challenge	Specific Example	Specific Aspect of PCMH that Affects Challenge	Specific Aspect of FQHC that Affects Challenge	Solution Strategies or Facilitators that Reduce or Resolve Challenges
Inadequate facility space and design for team activities and interaction	• Not reported	• Not reported	• Not reported	• Expanding or redesigning facility space (e.g., intimacy of small facility, building team functionality into new facility)
Integrating new types of staff into care teams (e.g., care managers, health educators, behavioral, dental, referral, office staff)	• Not reported	• Not reported	• Not reported	• Inclusion in teamwork procedures (e.g., huddles) • Collocation with other staff • Integrated EHR and electronic medical record access
Lack of resources for additional staffing, hours, and training required to implement team-based care changes	• Not reported	• Not reported	• FQHCs considered to be especially resource-constrained; not many slack resources for changes	• Not reported
Provider and staff turnover disrupts team formation and requires additional training effort	• Not reported	• Not reported	• Provider and staff turnover especially high in FQHC settings	• Not reported

SOURCE: RAND analyses of qualitative interviews from demonstration and comparison FQHCs.

Empanelment

Empanelment is the process of assigning each patient in a medical practice to a specific provider or provider team—typically one who is well known to and familiar with the patient—this provider then becomes responsible for managing the patient's care. The provider and provider team are also expected to build relationships, track, and manage the care of all the patients in their "panel," as well as coordinate the care of those patients with other providers within and external to the medical practice (Exhibit A11.2).

Practice Changes

More consistent and complete use of empanelment. Site respondents mentioned empanelment as a change made in response to the PCMH transformation. Respondents often described how they had some form of empanelment before the demonstration, but that the demonstration compelled them to empanel more consistently or more completely than had previously been the case.

> The assigning of primary providers went pretty well. It was something that, actually, I think most providers were happy to have because they were pretty much seeing the same patients. They consider themselves to be the primaries. But the organization did not, so they were not really getting credit for having a panel of patients.

Challenges

Demonstration FQHCs mentioned several obstacles encountered during empanelment.

Insurance rules. FQHCs had to deal with insurers who had their own rules about assignment of a primary care provider (PCP). For example, sites had to expend staff time to reconcile their internal empanelment with health maintenance organization (HMO) PCP assignments. Site respondents mentioned the [often large] panel sizes recommended by payers, but felt these were not realistic for the FQHC patient population, which tends to be more medically complex.

Missed appointments. Respondents described how the largely low-income, uninsured patient population led to large numbers of missed appointments. In the midst of the scheduling changes, and because patients need to be seen, some clinics found it challenging to maintain the empaneled patient-provider relationship. Respondents also described patient preferences or habits as an obstacle to empanelment; when continuity of provider was not a priority for patients, the link between panel characteristics and provider performance weakened.

> The other thing I think that we've had the biggest problem with is PCP assignment and appropriate empanelment . . . In [our region], [our FQHC] is the place to go, but a lot of people, when you ask, and this happens tons in the hospital, "Who sees your baby? Oh, I take him to the [FQHC]." . . . And a lot of people do, they pick a day that they are available or they're off work. They work six days a week and they're off on the seventh and so whoever's been able to see them at [our clinic] sees them. . . . So, I've had a hard time getting really good quality data for our providers, getting really accurate panels.

Empanelment does not mean that patients can see only their assigned provider; the care team approach of PCMH is intended to provide continuity for patients within the entire care team, so an advance practice nurse working on a care team might see a patient if the provider is unavailable. Some site respondents noted that one implication of

empanelment was the need to hire additional back-office staff, such as MAs and RNs for chart review and documentation, to allow the doctor to focus on the core medical components of the patient's visit and to allow other members of the clinical team to provide patient education as well as care management and coordination.

Provider turnover. Typical churn in providers experienced by FQHCs made empanelment something that was not going to happen once and be completed, but was instead an ongoing process of assigning and reassigning as providers come and go. Provider turnover was also a challenge, but of a different type, since sites were trying to educate their patients about the role of a PCP. When providers repeatedly left, some patients became skeptical of the utility of being assigned to any one provider.

> And when you have providers leave and new providers come, we had a huge turnover at one of our sites, it's just been, for some reason, really difficult to maintain provider staff. And so, well, gee, how do you maintain empanelment or at least contractive empanelment, if nothing else, when you have this constant turnover? So it's not like you do it and then it's done. It's like just constant maintenance on keeping people aware of the fact, "well, these are your patients and you have to be responsible for them and here they are and how do I get that in front of you?"

> We had a lot of issues with people not really being able to identify someone they wanted as their PCP. I think this was also made worse by the fact that there had been some turnover for a while . . . When I first got here, the very first question that all my patients asked me was like, "Are you going to stay?"

Facilitators and Strategies

Use of front office staff to educate patients on empanelment. To support empanelment, some sites used the front desk staff to educate and engage and patients on the importance of choosing a provider and to guide them through the process of picking a provider. Working with patients sometimes involved directing them to provider "bios" that were posted in the waiting room, helping them make phone calls to their HMO to have their PCP reassigned, and suggesting a compatible provider to patients with whom they had built a rapport.

> Our front desk has a script about the different providers we have. We have posters about the providers, we've got their personality and photo in the waiting area. They don't have to pick it their first visit, but second visit we start asking them, "Is this the provider for you?" . . . I hear more questions as to why, "Why do I need to pick a specific provider? Can't I just see anybody?" And then they say, "Why would you ask me that? I always see Dr. so-and-so." So it's more of the patient education as to why we're empaneling, more for our ability to make sure that we're giving them that continuity of care.

Experience of Comparison Sites

Practice changes. Comparison site respondents made fewer remarks about their experience with empanelment than demonstration sites, but site leaders at comparison sites did raise the issue of the need to negotiate HMO assignment of PCP when enacting empanelment.

Challenges. Comparison and demonstration site respondents raised similar challenges around engaging patients in empanelment and reconciling panels with HMO/insurer PCP assignment.

Facilitators and strategies. Both comparison and demonstration site respondents mentioned front desk staff engage patients in choosing a provider.

Exhibit A11.2. Summary of Challenges and Strategies Around Empanelment

Type of Challenge	Specific Example	Specific Aspect of PCMH that Affects Challenge	Specific Aspect of FQHC that Affects Challenge	Solution Strategies or Facilitators that Reduce or Resolve Challenges
Patients not wanting, understanding empanelment	• Patients switching PCPs • Patients preferring flexibility in appointments over continuity of care	• Not reported	• Patient understanding and habits around health care model • Patient barriers to care that make flexibility a priority	• Not reported
Staff turnover as hindrance to empanelment	• Not reported	• Not reported	• Higher levels of staff turnover due to staff models (e.g., J-1 visas) and burnout	• Not reported
Need to reconcile panels with HMOs' record of PCPs	• Not reported	• Not reported	• Not reported	• Not reported

SOURCE: RAND analyses of qualitative interviews from demonstration and comparison FQHCs.

Open Access

Traditionally, patients receiving care at public clinics were assigned to "block appointments," meaning that multiple patients were asked to report at the same appointment time. Patients then waited for hours until their name was finally called. This system of calling patients to clinic without a specific timed appointment or provider assignment within their designated block was designed to ensure that patients were

available at the clinic when a provider was ready to see them. However, this system meant that most patients had to remain in the clinic waiting room for hours. This created stress for many patients, including those who missed work to attend the appointment and those with child or other care responsibilities.

Enhancement of patient access and continuity has been identified by NCQA as a fundamental prerequisite toward transformation to a medical home. Open access with same-day appointments is one measure of patient access and continuity (see Exhibit A11.3).

Practice Changes

Demonstration FQHCs generally implemented practices related to increasing patient access to care during the PCMH transformation. The most common forms of open access were same-day appointments and after-hours telephone services, but site respondents also discussed the timeliness of returning calls and messaging through the patient portal.

Same-day appointments. Instituting same-day appointments involves building appointments into provider schedules for this purpose, acclimating providers and patients to the new practice, and figuring out how to make other PCMH practices work with same-day appointments.

> We've always had the opportunity for patients to call in to obtain an appointment, but . . . the entire patient-centered medical home project is identifying slots that, each day, on the template, for all of our providers . . . permit patients to come in the same day. So this ensures that patients will always have the ability to come in the same day.

After-hours access. At some sites, after-hours access was accounted for by having providers on call evenings and weekends. Other sites used a nurse answering service or other type of third-party system to provide care for patients when the clinic was closed.

> The patients can call in with questions. I don't know where they were prior to me coming, but that is a PCMH component, and we have a lot of phone calls from patients, so I do know that they know of that resource. We've implemented an after-hours call through a third party, and we're working on patients using that resource, so I think when they will, they'll find it beneficial. They can get advice. "I really need to go to the emergency room, can I wait until the morning? What should I do?"

> I think same-day access is really attractive to our patients. Timeliness of response to phone calls. We've always returned phone calls, but we have to actually enforce the 72 hours for nonurgent messages and then the 24 hours for urgent messages. And that has to be documented. So patients have gotten used to us becoming more responsive.

Little discussion of practice changes to increase linguistic and cultural access. FQHCs in the qualitative sample appeared sensitive and experienced in accommodating access to the linguistic and cultural differences among their patients (e.g., having bilingual staff, offering interpreter services, providing patient materials in a languages of

major subpopulations, and understanding attitudes toward medical care of recent immigrant and various ethnic groups), and thus appeared not to need substantial changes in terms of access. However, as discussed in the section on Change Management Facilitators and Strategies in Section 4.2, patient populations in FQHCs are often characterized by high linguistic and cultural variation to which the NCQA PCMH model was viewed by some sites as not always well suited, with particular challenges related to care planning, patient self-management and the patient portal.

Challenges

Site respondents raised three major concerns about practice changes to increase access, especially same-day appointments.

Increase in no-shows. Respondents speculated and sometimes presented evidence that offering same-day appointments increased the no-show rate; if patients could be assured that they would be seen any day, there was less incentive for them to keep an appointment. No-shows were both costly to the clinic and irritating to providers.

> We operated on a 16.9-percent no-show rate three years straight. I mean, it was as consistent as the sun coming up. We started opening up our schedule and it went to 26 and it was hard to pay bills. Patients knew, "if I don't manage my schedule, I can just show up or call in whenever and get it that day." So it's a good thing but you have to really manage it. You really have to educate the patient.

Difficulty implementing same-day access. Moving to same-day access necessarily resulted in shifting control for patient appointments away from clinic staff to central schedulers and managers.

It was unclear from interviews how the current process for same-day visits differed from previously accommodating walk-in care. It is possible that sites struggled to reconcile PCMH's emphasis on empanelment and previsit planning with the seemingly spontaneous same-day visit. Respondents reported that the adjustment to open access was challenging for patients as well, who may have previously been accustomed to a walk-in clinic format.

> It was definitely a culture shift and shock to our patients. Not as chaotic at my particular site as we thought it would be. I think we mentioned that we have actually had a dedicated walk-in provider that we have done away with and we now have the same-day appointments. So it's been a learning curve to our—again, the hospital that we work with who makes the appointments sometimes for us or sends the patients over to us, as well as our patient population who was used to really using walk-in as their primary care. So it wasn't as chaotic as we thought it would be, but it's definitely been a culture shock for the site.
>
> Oh, same-day appointments, that was a big impact, because we did a lot of walk-in stuff before that, so getting patients to understand to call and

> then we can still get them in, but yet trying to get it a little bit more organized, for the providers as well.

Difficulty in establishing consistent information flow. Another concern about same-day appointments was the amount of effort needed to create and establish a consistent flow of information for the team to use about the patients being seen in a given day, including the limitations and difficulties of having an EHR support the creation of such information. Difficulties included creating templates in the EHR that could pull together information for treatment plans, hiring additional medical assistants to review and prepare information for patient visits, and creating the templates and interfaces needed within an EHR to track any chronic disease patients that were being seen on a given day. These demands on automated workflow of information were highlighted as increasingly important, given the shifts to same-day scheduling.

> [It was a challenge] to create a flow of information about a patient who's coming in so that we just get things done.

Care teams struggled with completing previsit planning on short notice and seemed to dislike the element of surprise about who might be coming in that day. At least one site had developed a process for previsit review to be conducted for same-day appointment patients while they were waiting in the office. This review was intended to identify needed preventive care and testing that could be addressed during the patient's current visit, although it would not be able to address whether the patient had completed (or the practice received results of) any ordered testing or specialty referrals, which would generally be covered in the regular previsit planning process conducted a day or two ahead of time.

Facilitators and Strategies

Many FQHCs already had some capacity for walk-in or same-day appointments before the PCMH transformation, so they were able to build on those services or strengths to enhance their open access.

Holding slots open for same-day appointments. An important strategy for providing same-day visits without derailing care teams' schedules was to hold open time slots as same-day appointments to accommodate more acute-care patients or patients who had availability on that day.

New scheduling practices. Respondents described several strategies related to scheduling, including judiciously double-booking appointments and creating different classes of appointments (e.g., same-day, walk-in) to balance care team time with patient demand.

> This site was the first one that piloted the whole open-access/same-day slots/we-will-fit-everyone-in type of strategy. And it really has made a huge difference. It's made a huge difference for us as providers, in that

> we now have the satisfaction of seeing someone when they're sick. I think for the nursing staff, it's eliminated all of that triaging [of walk-in patients] and trying to shuffle patients around [to fit walk-ins in the schedule]. And patients get to be seen when they need to—we're not all floating all this stuff in the ER [emergency room] constantly. So it's been very good.
>
> Two of our doctors are [dedicated] a half-day to help with that open access. But the other providers have a time slot [for same-day appointments] . . . That really does help because a lot of providers do overbook their schedules . . . because we're kind of banking some might not show up and it kind of balances it out. But sometimes everyone will show up and then you've overbooked your schedule.
>
> We always have availability for walk-ins, because we have the same-day appointments, so that's built into the schedule. . . . We have Saturday slots and then we have what's called same-day slots, which are double-booked slots, because we assume a certain no-show rate, so we double-book certain slots on the hour, and those would be for our acute walk-ins and things like that to be fit in.

Experience of Comparison Sites

Practice changes. Both comparison and demonstration site respondents raised similar themes about initial staff resistance to same-day appointments, along with eventual acceptance and agreement that this type of scheduling model is feasible and good for patients. Both demonstration and comparison site respondents discussed various types of open access (e.g., after-hours phone numbers, evening appointments) other than same-day appointments. Like demonstration site respondents, comparison site respondents made little mention of changes made to accommodate the cultural and linguistic preferences of patients, although they may already have such accommodations as part of their procedures.

Challenges. Comparison site respondents mentioned similar challenges to open access as demonstration site respondents. Comparison site respondents did not mention any patient-related barriers to open access, such as no-show rates, which were noted by demonstration site respondents.

Facilitators and strategies. Like demonstration site respondents, comparison site respondents discussed the benefit of implementing a systematic approach to designating time slots for same-day appointments to facilitate scheduling patients. This approach enhanced continuity of care among patients and providers and facilitated access to care at times that were convenient to the patient. Comparison site respondents discussed EHR as a facilitator of previsit planning for same-day appointments, which was not mentioned by demonstration site respondents.

Exhibit A11.3. Summary of Challenges and Strategies Around Open Access

Type of Challenge	Specific Example	Specific Aspect of PCMH that Affects Challenge	Specific Aspect of FQHC that Affects Challenge	Solution Strategies or Facilitators that Reduce or Resolve Challenges
Open access increases no-show rates	• Not reported	• Capacity for same-day appointments required by PCMH	• Not reported	• Not reported
Culture change, need to adjust to same-day appointments versus walk-in model	• Need to educate patients about calling ahead	• Not reported	• Patients who are accustomed to walk-in care	• Not reported
Challenge of doing previsit planning for same-day appointments	• Not reported	• Tension with other component of PCMH model—previsit planning	• Higher walk-in or same-day appointment rate in some FQHCs	• Develop abbreviated previsit review to conduct while patient waiting in office (e.g., to identify needed preventive care)

SOURCE: RAND analyses of qualitative interviews from demonstration and comparison FQHCs.

Patient Web Portal and Other Remote Access

A component of enhancing access to patients includes remote access (Exhibit A11.4), such as a web-based patient portal for accessing records, scheduling, or communicating with the care team, or other ways patients can connect to the FQHC after-hours or off-site (e.g., adding a centralized scheduling function or a nurse answering service).

Practice Changes

Variation in level of patient portal implementation. Demonstration FQHCs were at various stages of implementation of a patient portal; while some had portals that were up and running, many respondents reported challenges that kept them from making this change as part of the PCMH transformation. For sites that did have portals, efforts were being made to get patients to use the portal, mostly through provider invitation to the portal and general encouragement and education from all clinic staff. Site respondents also described changes to other electronic and remote access that were made as part of PCMH transformation, such as establishing a call center to handle appointments across clinic sites, and routing phone calls directly to care teams when a patient wants to get in touch with his or her provider.

> We actually moved [the responsibility for scheduling] appointments, when we established call center utilization management, so that the physicians and nurses in the health centers would not have to spend time in administrative work, making appointments, making referrals, so that they could spend more time with patients.

Challenges

Patient engagement with portal and electronic communications. Several demonstration respondents discussed challenges in engaging patients to use a patient portal and communicating with patients electronically, especially given lower levels of computer and language literacy and technology access typically found in FQHC patient populations. Respondents also described technical challenges and lack of internal capacity to launch and support a portal.

> In order to have 20,000 patients using the patient portal, I imagine we'd want to have somebody who's in charge of making sure that they can. So, for example, our portal doesn't work well on Internet Explorer version 9 or lower, so if a patient is on a lower version of Internet Explorer, they won't be able to view the portal properly. And they call.

> I can almost tell you by percentage, because we're watching it so closely with meaningful use, but as far as how many patients are even offering us their e-mail, we're at about 40 percent, maybe. We do see a lot of migrants and a lot of mobile patients, but they still have smart phones, so it's not necessarily [that] they might not have a computer per se, but we're at about 40 percent. But our goal, which is the meaningful use measure, is 5-percent engagement and we're going to be lucky if we're at 1 or 2 percent by the end of this month.

> We do have a portal. Getting our patients to use it is a challenge. A lot of our patients don't have e-mail. I guess we have emails on about 50 percent of our patient population now, but even so, just because they have email doesn't mean that they can go through the process of logging in.

> It was a challenge to implement the patient portal. We had our Health Education Department help do the translation for the patient portal. So, now that we have the patient portal, there's an English version and the Chinese one, although it's not completely Chinese, some of the instruction is in Chinese. For example, the report cannot be translated into Chinese—I mean, they can send requests in Chinese, but the report that they receive may not be in Chinese. Our providers cannot communicate with them through the portal in Chinese.

Facilitators and Strategies

Through their experience with the patient web portal, several demonstration FQHCs identified solutions or potential solutions for increasing use of the patient portal.

Provider buy-in and promotion of patient portal. For example, site respondents described how provider buy-in and sitewide promotion of the patient portal created a context in which patients would enroll and use the tool. Site respondents also emphasized the need for education and support for patients who might not be very computer literate, or who have concerns about security.

> I think our biggest struggle [with the patient portal] has been getting patients interested in it. And I think what we have found is, without the

> providers' buy-in, the patients really aren't interested. The one provider we have who really pushes the portal has, by far, the most patients enrolled in the portal. So, I think we underestimated the importance of getting the providers on board with it fully, before trying to roll it out. That being said, we have a number of patients enrolled in it who aren't using it. So, you know, it's kind of a multistep process. Not only do we want them to enroll in it, but we want them to use it. Of course, I think we're struggling on both ends of that.
>
> We have a really strong social media and marketing campaign around this issue. Again using everyone [who] touches the patient to engage them about the portal and do some education as well as getting them registered for the portal . . . I think we've actually made some headway, yes, we have . . . The fear is on Internet security. I think that prevents certain patients from signing up altogether. But part of the campaign is also to alleviate some of those fears.

Experience of Comparison Sites

Practice changes. Similar themes were identified in the comments made by demonstration and comparison site respondents about implementing a patient portal. Some demonstration site respondents described how the demonstration provided positive external pressure that spurred them to implement the patient portal; a parallel theme obviously did not exist in the comparison site leaders' comments. With regard to other electronic or remote access, many more demonstration site respondents described establishing an after-hours call service than did respondents from comparison sites.

Challenges. Challenges to implementing the patient web portal reported by demonstration and comparison site respondents were similar. Both sets of respondents noted that some patients would not benefit from a patient portal only available in English.

Facilitators and strategies. Both comparison and demonstration site respondents discussed designating an individual to train and teach patients how to use the portal. Comparison site respondents even mentioned training a trusted individual, such as a family member or caregiver, to teach patients how to use the portal. Comparison site respondents discussed strategies to best engage patients with the web portal through the use of brochures, flyers, and other advertisements, as well as creating an "app" that makes the portal easily accessible.

Exhibit A11.4. Summary of Challenges and Strategies Around Patient Web Portal and Other Remote Access

Type of Challenge	Specific Example	Specific Aspect of PCMH that Affects Challenge	Specific Aspect of FQHC that Affects Challenge	Solution Strategies or Facilitators that Reduce or Resolve Challenges
Patient language	• Patient portals often only accommodate English and occasionally one or two other languages (e.g., Spanish) • Some EHR and patient portal software technically unable to support Asian languages	• Not reported	• FQHCs provide care for many patients who communicate primarily in a language other than English	• Not reported
Patient computer literacy	• Patients unable or wary of web-based communication with their doctor	• Not reported	• Not reported	• Customizing or designing websites to be accessed on smartphone, which are more common than computer access • Computer literacy tends to increase with younger generations of patients
FQHC internal capacity to roll out and support patient portal	• Patients who have technical issues with patient portal ask for help from FQHC • Clinic IT staff and infrastructure not always robust enough to handle implementation of a patient portal	• Not reported	• FQHCs often are limited in IT and other staff for technical and customer support of a patient web portal	• Not reported

SOURCE: RAND analyses of qualitative interviews from demonstration and comparison FQHCs.

Ensuring Access to Specialty Care

Although access to specialty care is not included as a specific PCMH component in the NCQA 2008 standards model, many demonstration FQHC respondents described this as an important issue affecting access for substantial segments of their patient populations, as well as tracking and coordinating with specialty care (see Exhibit A11.5, as well as discussion of specialty care in Section 5.2).

Practice Changes

Formal and informal arrangements with providers. Several site respondents described changes they made in attempts to improve access to specialists for their patients. Some sites engaged in formal or informal arrangements with outside providers who agreed to provide discounted care for patients without insurance. Some of these arrangements are described below, as facilitators of specialty access.

Challenges

Difficulty in accessing specialists. Many FQHC demonstration site respondents reported challenges accessing specialists. Lack of specialist access was caused by several factors, including lack of specialists in the geographic area, lack of specialists who accept low-income (i.e., Medicaid and uninsured) patients, and, to a lesser extent, lack of specialists who are prepared to treat the linguistically and culturally diverse clients of FQHCs.

Lack of specialists in a given market was a challenge. Site respondents named behavioral and mental health, dermatology, ophthalmology, endocrinology, gastroenterology, cardiology, and ear, nose, and throat as particularly challenging areas.

> Access, right. Getting them in is what the problem is. Or, like, pain management, I mean, you're looking at six months out and it's like, OK? You know, you don't want our doctors overprescribing narcotics, but when they can't get into a pain doctor to be evaluated for six months, what are we . . . what do you do? So that's where the providers, I think, struggle the most. Same thing with mental health. We have [one behavioral health provider] here in town and they have a psychiatrist that comes, like, once a month for four hours. We have a huge population of mental disorders down here, along with—we probably service 150 kids with ADHD [attention deficit hyperactivity disorder].

> We had talked about in the past having an ophthalmologist here, you know, once, twice a week, whatever—once a month even—to take care of our patients who—because that's a hard specialty to get. And we're finding that, for children, I'm just reading the comments made by my referral coordinators as they try to find specialists for children. Not for ophthalmology, but optometrists. Because there's a lot of doctors who won't take children under the age of three who seem to have vision problems. And they just say, well, we don't do, we don't practice, we

> don't have practice for those kids under three. Well, who's going to see these kids under three?
>
> The specialties are there [in the local university hospital]. It's just that in [our state], this is the only medical university in the state, the only place for indigent care in the state . . . So you're not just competing with everybody in this metro area, there are people coming from all over the state for specialty care.

At rural sites and even sites in smaller cities, specialists could be a significant distance away. One site emphasized the access challenge by estimating, "it could be a four-hour trip for a patient to get there."

> The transportation is another issue as well, there. So, again, as you saw driving in, it's—we're isolated. It's, you know, 45, 50 minutes to the closest emergency room. Most of the specialists are not going to be in town.

Respondents discussed the challenge of finding specialists who will accept Medicaid patients or patients without insurance.

> The availability of specialists also [is a challenge], the population that we serve, because they're underserved and so forth, or, uninsured, I should say, that you may have specialists who may not want to see them because they don't have any insurance.
>
> For all of our uninsured patients, they have to go to our local medical center for specialty care and, unfortunately, they have to wait months, nine times out of ten, and it's truly a black hole.
>
> The challenge is that they want more than MediCal/Medicaid rate. And the super specialists we do contract at Medicare or Medicare Plus, but that's one of the challenges. . . . The other challenge is once they get too many either uninsured or MediCal, then they either send us a letter or they contact us letting us know that they're at capacity. So we'd have to look for another specialist that's contracted with [our FQHC].
>
> You know, [specialist providers are] plenty busy with all the people who are newly insured, so they can set their own rules about what patients they'll accept.

In discussing specialist follow-up and tracking, one PCA leader described how the largest issue among FQHCs in his state was lack of specialists who would see FQHC patients, likely those Medicaid or no insurance.

> We are running into [problems with access to specialty care] hugely in [our state] . . . I haven't heard in the context of APCP or recognition work, [that sites are not] able to get points for those certain areas because having systems of communication with specialists is challenging. But I have heard someone say, "I'm not able to meet my PCMH goals because there aren't enough specialists willing to see my patients." But network adequacy is a really big challenge, particularly in rural areas of [our state] where there's just nowhere for patients to go.

Some respondents also mentioned the challenge of connecting patients with specialists who speak patients' languages.

> A majority of the patients out here [at our site] are Hispanic. So you have a lot of language issues where—For our center, it's not a problem for the most part. Most of the staff, almost all the doctors are fully bilingual, can communicate well. But again, if they try and go out and see a specialist, that might not be the case.

Facilitators and Strategies

Transportation, telemedicine, specialty management training, patient programs. Respondents at demonstration sites described a variety of strategies for improving access to specialty care for their patients, including arranging transportation for patients needing to visit specialists outside the community, implementing telemedicine programs to enable remote consultations with specialists, training FQHC providers in primary care–specific management of specialty conditions, and connecting patients with specialty care networks or subsidy programs for indigent patients.

> We have transportation to [regional city where many specialists are located]. We have a bus that goes every day and takes . . . to their specialist visits. We've had that for years . . . [Patients] sign up. We have them, you know, right on the computer. The referral people just put it right into the [computer].

> [Specialist access] improved [when we began] contracting them on our own [to work part-time in the FQHC]. In the past, it used to take three to six months to get an appointment with the specialist. Now it's within a week or two we can get them in.

Negotiation with specialty care services. Another strategy to improve specialist access for uninsured patients was to negotiate with specialty care services. Respondents also described efforts to connect patients with pro bono services.

> We do have some very strong partnerships, one of which is with a radiology group outside of the hospital and they have been very helpful in reducing costs to us and to our patients. And we can pretty much get any radiological procedure done at a reasonable price, lab studies as well. We've negotiated a very fair contract with one of the big labs around and we're working on trying to get an interface with the radiology group. We don't have that right now, but that would be even more helpful.

> Basically, we try to work with the different agencies or whatever that help the uninsured patients. And when I say "work with them," we try to get them the documentation that they need to get to the specialists who are providing pro bono services and so forth.

Good relationships with health care systems. Some sites benefited from having good relationships with larger health care systems. In this example, the respondent

describes how good working relationships and the coincidental collocation of the FQHC with a specialist office has facilitated special access.

> We have a lot of specialists in [one regional hospital system], especially the pediatrics subspecialists . . . So we have good relations, I mean, good personal relations. To give you an idea, the office that I practice at, literally across the hall, [their] subspecialists have a satellite office. So the subspecialists come in and rotate through there. It's, you know, just a step below integrated care. But the idea being if something comes up we can just send a patient right over or we can walk over, they walk over to us and say, hey, what do you think about this . . .

Experience of Comparison Sites

Practice changes. Leaders from comparison sites made few comments about practice changes intended to increase access to specialty care, but what they did say was similar to approaches or changes made by demonstration sites.

Challenges. Similar challenges were identified by demonstration and comparison site respondents. In particular, respondents from demonstration sites mentioned contracting with specialists to bring them onsite on some limited basis to facilitate access. This theme was not as prominent among comparison site leader comments.

Facilitators and strategies. Comparison site respondents described similar strategies to improving patient access to specialty case as demonstration respondents. They highlighted the benefit of building relationships with community specialists, including partnership with academic medical centers, the importance of providing transportation to allow patients to see remote specialists, and ways that they were able to provide specialty care at the FQHC through part-time providers or telemedicine, for example.

Exhibit A11.5. Summary of Challenges and Strategies Around Ensuring Access to Specialty Care

Type of Challenge	Specific Example	Specific Aspect of PCMH that Affects Challenge	Specific Aspect of FQHC that Affects Challenge	Solution Strategies or Facilitators that Reduce or Resolve Challenges
Regional shortage of specialists	• Extensive patient travel required to see specialists • Long waits to see some types of specialists in some communities	• Not reported	• FQHC patients tend to have lower access to personal transportation	• Providing transportation (group or individual) for patients to specialty providers who may be farther away
Lack of specialists who would accept Medicaid and/or uninsured patients	• Not reported	• Not reported	• FQHCs tend to have more Medicaid or uninsured patients	• Regional or local pro-bono specialty networks
Lack of specialists who can communicate effectively with non–English-speaking patients	• Not reported	• Not reported	• Many FQHCs serve large numbers of patients who do not speak English as a first language	• Not reported

SOURCE: RAND analyses of qualitative interviews from demonstration and comparison FQHCs.

NCQA Domain Two: Identify and Manage Patient Populations

Population Management

Population management is the component of PCMH that entails collecting demographic and clinical data, creating registries for patients with specific conditions, and identifying patient risk factors through the use of patient records (see Exhibit A11.6).

Practice Changes

Identifying high-risk patients, monitoring key indicators, tracking preventive care. Site respondents described engaging in population management—such as identifying high-risk or high-utilizer patients through analysis of records, monitoring key indicators across the population of patients with chronic conditions, and tracking preventive care—as part of PCMH transformation. In their descriptions of these activities, respondents seemed to embrace a QI mindset with regard to formally monitoring the needs and status of their patients.

> I guess the biggest change that we've made in the last year is that we've always had all this data on all of our patients and I give it out in provider

> report cards and in lists and in registries . . . But my CEO last year said, "You've got to get the data out of your office and into their hands on a regular basis." So, we took our data and we bought [a dashboarding software] and now we publish our data . . . I run a series of queries monthly and then I update the dashboard so that the providers can go in and . . . there's a list of all the providers and then it will give how many patients that are on their panel that they've never seen, how many are on their panel that they've seen once, how many are on their panel that they've seen, say, two to four times, five to ten times, and then on up and then a total. So they can see, we can look for outliers. You know, what about the provider who has a whole bunch of patients he's only ever seen once, what does that say? And what about the provider who has tons of patients that he's never seen? I mean, for new providers that happens, but once you've been around a while, that shouldn't happen. And then, does that mean there's something wrong with our empanelment process and should we go look at those patients and are they assigned wrong? So it helps us from that point of view.

Challenges

Need for consistent documentation. The main challenge to instituting population management efforts at demonstration FQHCs was consistently collecting usable documentation of the risk and health care measures of interest. This involved figuring out if the EHR could provide the needed data, customizing it if necessary, and training and monitoring providers to ensure that they were recording patient and practice information correctly and for every encounter.

> One of the other challenges with [our EHR] is that it doesn't have, at least currently, a way to do a registry report. So, where we've committed to doing screening and services on an annual basis, there isn't a great way in [our EHR] to say, "Ms. Jones is coming in at 10:30 today, what does Ms. Jones need today, in terms of on an annual basis, on a screening basis?" And so, the work of digging in to find that information falls to those clinical support teams to do during previsit planning. So, that's another challenge with our electronic health record, and we're trying to mediate that by creating our own registry functionality. But, in the absence of that, it puts tremendous pressure on the clinical support staff to be able to meet all of those deliverables and then also to continue to meet our productivity requirements, because, you know, those didn't go away.

Reorientation of providers. Another challenge was related to the need to reeducate providers from a focus on urgent care to managing all the medical needs for their panel of patients. Other respondents also discussed this change in mindset as a challenge of PCMH transformation.

Facilitators and Strategies

EHR functionality. When asked about facilitators of population management activities, several demonstration respondents mentioned investing in additional EHR functionality.

Using external data. Population management processes sometimes drew on external data. Some respondents reported using insurance claims data in addition to internal EHR records to improve identification of patients with high-risk or complex care needs.

> Since we pay the claims also for the Medicaid patients, we know when they show up [to the ER]. And we also run reports on a monthly basis and try to case manage those patients so that they can come in and be seen by our primary care providers. . . . We established a utilization review and utilization management session within Clinicas so we're able to get this information.

Linking population management to empanelment. Finally, one respondent linked population management and empanelment, both areas of emphasis for PCMH, by discussing how empaneling patients created useful groups to focus on. Identifying outliers within a panel was more easily translated into an action item for the care team to reach out to those patients to investigate the cases.

> There's a list of all the providers, and then it will give how many patients that are on their panel that they've never seen, how many are on the panel that they've seen once, how many are on their panel that they've seen, say, two to four times, five to ten times, and then on up and then a total. So they can see, we can look for outliers.

Tools and training to provide a standardized approach. Comments by one PCA leader aligned with themes raised by site leaders. This respondent noted that demonstration sites had different levels of preexisting capacity for population management, and suggested that tools and training to provide a standardized approach could be helpful to some sites.

> Well, the way that they were able to identify their population, you know . . . that's where some of that spread and ramping up, I think, really is a struggle. I don't know if they know how to do that analysis and assessment, if there was some kind of a workbook or formula that could remind them to go through and run their registry to review some of those things. Some [FQHCs] are very sophisticated and, I'm sure, have been doing that all along. But others, I don't even know if they really have a way.

Experience of Comparison Sites

Practice changes. Changes made to identify and manage patient populations were similar across comparison and demonstration sites.

Challenges. Comparison site comments focused on the challenge of population management, due either to lack of EHR or lack of capability of EHR, which was

extremely similar to what demonstration site respondents reported as leading challenges. Two demonstration respondents mentioned how the work of population management was changing the mindset or patient care approach of the practice, a theme not present in comparison site comments.

Facilitators and strategies. Comparison site respondents did not describe any facilitators of population management.

Exhibit A11.6. Summary of Challenges and Strategies Around Population Management

Type of Challenge	Specific Example	Specific Aspect of PCMH that Affects Challenge	Specific Aspect of FQHC that Affects Challenge	Solution Strategies or Facilitators that Reduce or Resolve Challenges
EHR capabilities	• Not reported	• Not reported	• Not reported	• Not reported
Consistent documentation of care	• Not reported	• Not reported	• Not reported	• Not reported
Changing staff mindset or educating staff about method and purpose of population management	• Not reported	• Not reported	• Not reported	• Not reported

SOURCE: RAND analyses of qualitative interviews from demonstration and comparison FQHCs.

NCQA Domain Three: Plan and Manage Care

Previsit Planning

Previsit planning refers to identifying and preparing the types of care, procedures, and clinical and other information needed prior to a patient's visit in order to optimize the encounter for the patient and provider team (see Exhibit A11.7). Previsit planning is often accomplished through review of the patient's reason for visit, schedule of preventive care, current care goals, and outstanding laboratory or diagnostic testing (and ensuring results are obtained) up to a day or two prior to the appointment, as well as "huddles"—brief meetings of the care team on the day of the visit that allow team members to familiarize themselves with the patient's most recent medical information and plan the priorities for the visit.

Practice Changes

Variation in previsit planning. There was a large amount of variation in how site leaders from demonstration FQHCs described the implementation of previsit planning.

Although many site leaders talked about the "huddles" being new to their practices, the form of these huddles ranged from the more-typical model—a daily morning meeting with the care team to discuss scheduled patients—to other models—such as "real-time" chart abstraction done by an MA immediately before the visit, or "focused" previsit planning during which providers emphasized referral tracking or population management for a month or several months.

> There was a strong emphasis in 2011 standards on all the prework necessary for the patients coming in, and we had the team adapt to doing it real time instead of struggling with getting it done at the end of the day for the next day. They [used] the electronic system to do it real time, which made more sense because of all of the effort that they put into the prework the previous time and getting a lot of no-shows.
>
> How that works, then, is that the MA goes in, does previsit planning a few days before the visit, makes sure their labs are done. So then when that scribe comes in, they sort of do a mini-huddle. So, that provider and that scribe know this is what we have to have done, this is what needs to be addressed today, this is what the patients are here for today, and then that's what they go after.
>
> Because if you have one provider and a very small staff, you approach the morning huddle in a very uninvolved easier way to do it than if you have eight or ten providers and 16 different staff members supporting that pod or that line of business. And so you have to be able to keep the intent of the standard in mind, but allow some flexibility to say, "This is the way we can adapt for this particular site." If you're too rigid, you will alienate and it'll become more of a check-the-box type of activity than the true intent of the centered home.

Change in team dynamics. Respondents also discussed a change in the care team dynamics that they saw as an effect of the previsit planning team meetings, and efficiencies created by previsit planning.

> It does vary across the system, not everyone does super previsit planning and not everyone does the worst. I mean, there is a range, according to provider abilities and according to nursing staff and what the shakedown is, but ultimately, if you do really good previsit planning, . . . it makes the day go by so smoothly, but also you feel like you've really covered everything, because you thought about it, you've templated it in there.

Greater awareness of at-risk patient visits. Another respondent described how they have reorganized to be aware of when their at-risk patients are coming in to enable the team to address the patient's specific issues.

> In managed care, we now can run reports to see which ones are diabetes patients that haven't had a Hemoglobin A1C in the last six months, so that can bring it down below a nine. I think those are the hardest, but since we moved our outreach workers into the medical site where they're looking at appointments in advance and taking them to the team huddle, and . . . these patients are coming in, and we make sure they come into

my office before they leave to see if there's anything we can do. We can address the issues head on.

Challenges

Time requirements for previsit planning. One main obstacle was the additional time that the "huddle" and the preparation for previsit planning required of staff. This was especially difficult when patients missed appointments or came for same-day appointments, which wasted planning time in the former case, and forced the planning to be rushed in the latter.

With regard to their patient population, respondents also raised the issue of being especially pressed for time, where an extra 15 minutes in the morning is a luxury they could not afford.

Increased no-show rate. When discussing the increased no-show rate as a result of implementing same-day appointments, one respondent described the ripple effect that these scheduling changes would have on previsit planning.

> A1: And every fourth visit's a no-show. You can imagine what that does to your day before huddle or that day huddle—
>
> A3: Right.
>
> A1: Or tomorrow, when they show up tomorrow.
>
> A3: All that preparation, all that . . .
>
> Q: But that's the plan now, that's what you're doing.
>
> A1: It is what we do, yeah.

Difficulty in setting up automated reports. In revamping their work flows and teams, FQHC respondents discussed the challenges in setting up automated reports for huddles and previsit planning. Creating the automated templates is costly and requires IT efforts to figure out the best method to operationalize the needed reports.

Variation in previsit planning. Respondents at demonstration FQHCs also talked about how different sites and providers implemented previsit planning differently. This variation in execution of previsit planning is likely due, at least partly, to challenges that sites faced, such as (1) provider resistance, (2) lack of time in the schedule, (3) challenges of EHR, or others.

> The themes of the huddles have been different, and I think the first one was referrals. Because we did have some challenges and have some backlog. And so he made the focus of his huddle to work through referrals and whoever was coming in and what did they have pending. And if the patient hadn't gone to the referral, they would take that opportunity to educate the patient about the importance of the consult and give them any information or support, etc. So, I think, in that particular team, they moved on from the referral because they got caught up and working well. Some of the other providers, I think, still focus on referrals. So, this particular provider has moved on from referrals, and to

> patient-specific discussions and previsit planning and discussing the needs of the patient. So, I think for that particular team it was successful and they moved on.
>
> You brought up the huddle. And that's a good example. Because if you have one provider and a very small staff, you approach the morning huddle in a very uninvolved, easier way to do it, than if you have eight or ten providers and 16 different staff members supporting that pod or that line of business. And so, you have to be able to keep the intent of the standard in mind, but allow some flexibility to say, "This is the way we can adapt for this particular site." If you're too rigid, you will alienate and it'll become more of a check-the-box type of activity than the true intent of the centered home.

Limitations on physical space. Respondents from two demonstration FQHCs said that physical space limited their ability to support teamwork and team huddles. Ideally, members of the team are collocated to increase the interaction and interface time of all members of the team. Two other respondents described the difficulty they had ensuring that providers have the time to be present at the huddles. Another respondent described how the physical office space shapes how their care team adopted previsit planning:

> There's still always the challenge of getting providers there early to do it, making sure staff are all present. And they get pulled in several different directions at one time. So that is a challenge, but we still try.
>
> They all do the huddles; they just do it in sort of a different way. Right now, the teams are not necessarily meeting as a team. A team has two providers. And part of that is just locality of this building. One provider might be on one side of the building and the other one's on the other side. They don't meet together in the morning for that team. They meet together with their individual nurses and plan their huddle for the day for their patients.

Facilitators and Strategies

Use of EHR for patient reports. The major facilitator of previsit planning was the use of the EHR to generate summary patient reports.

> We generate a previsit planning report in the morning for all the patients scheduled to come in. But we can generate ad hoc previsit planning for any individual any time of the day. Our previsit planning, our data warehouse is updated every night at midnight, so it's very up-to-date data. It's web-based. The company that we use is web-based, so we could go in and just generate a report for that person that day.
>
> Actually, we just rolled out a bidirectional interface so now the data warehouse is pulling data from the electronic medical record, processing it, doing gap analysis and then feeding the gap and placing it directly into the electronic medical record. So, you really don't even have to look at your previous planning report. The gap is slapped right in there for you.
>
> You mentioned the previsit planning and that's big, because now that we have the EMR we can be going to the whole chart, treat the chart as a

> whole now. We can see referrals. We can see immunization. We can see the mammogram, the colonoscopy. Whatever is missing, we just have to click a button and everything comes up, what's outstanding, if this patient did go for their appointment, all of those are incorporated into our previsit planning, so that saves time a lot.

Experience of Comparison Sites

Practice changes. Based on interviews with site leaders, there seemed to be more variation in how previsit planning was implemented in demonstration sites than in comparison sites, but this may be an artifact of the smaller number of statements made by comparison sites about this practice change. Demonstration site respondents discussed how care teams organized the previsit planning to fit it into their schedules, a theme that did not emerge in the comparison site interviews.

Challenges. Demonstration sites faced similar challenges to previsit planning as those named by comparison site respondents, but also noted more nuanced challenges around this practice change, such as the relationship of previsit planning to other practice changes made (e.g., referral tracking). For example, one demonstration site noted as a challenge the fact that the previsit planning process required the care team to track down test results and specialist records that may or may not have been sent back. In this example, well-functioning referral and specialist tracking and follow-up would support previsit planning, but the dependencies multiplied challenges if pieces of the medical home were not yet working as intended.

Facilitators and strategies. Both comparison and demonstration sites utilized the EHR to generate previsit planning report.

Exhibit A11.7. Summary of Challenges and Strategies Around Previsit Planning

Type of Challenge	Specific Example	Specific Aspect of PCMH that Affects Challenge	Specific Aspect of FQHC that Affects Challenge	Solution Strategies or Facilitators that Reduce or Resolve Challenges
Time required for previsit planning	• Not reported	• Not reported	• Not reported	• Not reported
Previsit planning for patients who missed appointments was wasted time	• Not reported	• No-show rates occasionally associated with implementation of same-day appointments (see NCQA Dimension 1—open access)	• High no-show rates in many FQHCs	• Not reported
Not possible to do regular previsit planning ahead of time for walk-in or same-day appointment patients	• Not reported	• Another tension between implementing previsit planning and same-day appointments (two typical elements of PCMH model)	• Higher walk-in or same-day appointment rate in some FQHCs	• Develop abbreviated previsit review to conduct while patient waiting in office (e.g., to identify needed preventive care)
Provider tendency to customize previsit planning in a way that sometimes changed its purpose	• Not reported	• Not reported	• Not reported	• Not reported
Physical space not conducive to meeting, working closely together	• Not reported	• Not reported	• Not reported	• Not reported

SOURCE: RAND analyses of qualitative interviews from demonstration and comparison FQHCs.

Care Plan Development

A key component of the PCMH is the development and continued use of care plans, which ideally are developed with input and participation of the patient, and documented by the provider in the patient record for tracking care and health goals over time (Exhibit A11.8).

Practice Changes

Coordination of care plan development with self-management support planning and documentation. Respondents often described care plan development in tandem with self-management support planning and documentation, noting that new policies and changes in the EHR are now making documentation of these practices more consistent.

Challenges

Challenges to implementing care plans spanned providers, patients, and the EHR, as clinics tried to comply with PCMH guidelines by sharing and updating every patient's care plan at every visit.

Inconsistency in implementing care plan. Respondents described providers as being busy during the visit, and therefore needing periodic reminders or help from other staff in getting the care plan done consistently.

> Our providers need reminders. Sometimes we have to remind them that they have to update a care plan, provide a written care plan to patients. Sometimes the providers are busy with other things, so the nursing staff help to remind them—or, in our meetings, we have to keep reminding our providers to do that. They are already very busy with taking care of their patients, filling out a lot of forms, including, like, physical education (PE) forms, work forms for patients. So on top of that, the extra documentation that are needed for medical home are sometimes hard for our providers.

One PCA leader commented that creating and documenting care management plans was a leading practice at which many sites struggled. This respondent questioned the follow-up of care management plans because, for the purposes of the NCQA application, care management plans only need to be created and given to the patient.

> There's two areas where they struggle the most. One was on the personal care management plans and getting those done and documented. And then, who knows what the follow-through looked like, because the requirement is only that they get it done, get it in their hands.

Patient characteristics. Patient characteristics were also cited as a general challenge to care planning, partly because engaging with patients takes time and energy that many providers do not have, and partly due to characteristics of particular FQHC populations that may disincline patients toward engaging in a care plan, such as having other, more-pressing individual or family priorities, lack of health self-efficacy, or cultural orientations (e.g., older immigrants from countries in which patients give a high degree of authoritative deference to the doctor and do not expect to have input into care decisions).

Difficulty in using EHR to implement care plans. Lastly, the EHR was a challenge in implementing care plans:

> There are just things, as you talk about, like treatment plans. You would think there would be a place to build a treatment plan that you could

> carry from visit to visit and see how people have progressed or not progressed or are working with it. It doesn't exist in the EMR [electronic medical record].

Facilitators and Strategies

Previsit planning, assessing patient progress, and improving patient involvement. Demonstration site respondents discussed ways to enhance care management by emphasizing previsit planning, assessing patient progress toward treatment goals, and involving the patient and/or caregiver in care plan goals and decisions. Because preventive care was part of a standard care plan, the work of implementing the care plan patient sometimes fell to patient educators or outreach staff. Another example below describes how an EHR template for patients with diabetes instantiated a standard care plan that could be followed by the care team across visits.

> And so now, our patient care partners are working our lists and in the previsit planning, and in some of the lists we send out as part of PCMH, we send the lists to the site. So they know, "Mr. Jones is 58, hasn't had his colorectal screening." They are reaching out to the patient, whether or not they come in for a visit, to say, "You haven't had your screening or you haven't had your mammogram."

> And then one of the other things that we did for our staff is we implemented templates per chronic disease within our EHR. So if an MA is working with a patient that comes in and they're diabetic, there's a diabetic template in the EHRs that they go through and fill out and make sure that they've hit on all of them so that we make sure our diabetics get their eye exams as best as we have control. Their dental exams. You know, did they get their foot exam? Have they had their LDL [low-density lipoprotein cholesterol] checked? And their micro albumens, and all the other things that they check with that, as well.

Experience of Comparison Sites

Practice changes. In discussing care plan development, comparison site respondents talked about how EHR limitations required workarounds, and how developing and educating the patient about a care plan changes clinician workflow and the content of patient visits. These themes were largely similar to those mentioned by demonstration site respondents.

Challenges. Specific challenges to care plan development raised by comparison and demonstration site respondents were similar in content.

Facilitators and strategies. Comparison site respondents did not describe any facilitators to care plan development.

Exhibit A11.8. Summary of Challenges and Strategies Around Care Plan Development

Type of Challenge	Specific Example	Specific Aspect of PCMH that Affects Challenge	Specific Aspect of FQHC that Affects Challenge	Solution Strategies or Facilitators that Reduce or Resolve Challenges
Provider overload, lack of time to engage patients in care planning during the visit	• Not reported	• Not reported	• Not reported	• Not reported
Lack of patient interest or priority on proactive and shared care planning	• Not reported	• Not reported	• Some FQHC patients, such as older immigrants, may be culturally disinclined to participate in care decisions and more prefer to defer to doctor's judgment	• Not reported
Poor capacity of EHR to record and track care plans	• Not reported	• Not reported	• Not reported	• Not reported

SOURCE: RAND analyses of qualitative interviews from demonstration and comparison FQHCs.

NCQA Domain Four: Provide Self-Management Support and Community Resources

Self-Management Support

Practice Changes

Integrating self-management into clinical encounter. Site respondents described integrating self-management support into the clinical encounter as both a change and an enhancement over existing practices. They noted that not all providers or patients were really ready for or fully engaged in patient self-management practices, although respondents felt that sites had achieved more consistency in self-management practices and additional tools to engage patients (see Exhibit A11.9).

Tools for patients. Tools to engage patients included informational handouts (e.g., guidelines for a weight loss program) and information "kits." At one site, patients were given a tote bag with lists of current medications and important medical information. Other respondents described similar packets of information about the care team, PCMH, disease management, and self-care, all of which were designed to engage and support patients in self-management of their health.

Changes to the EHR. Finally, demonstration site leaders described changes to the EHR to allow self-management goals to be set and tracked over multiple visits.

> Now that [we use] a more structured approach, you tend to have that structured approach with every visit. So, whether it's an adult or a kid who walks in, you kind of follow the same system. Are these your same meds? Are you taking anything new? Do you have any allergies? What's happening with your smoking? Can we help with that? Look at your weight, it's been going up or it's going down, what should we do with that? So that sort of thing. In the past, we would often just fly through or skip. But now, we have so much more emphasis on figures, looking at them every time, you do tend to really pay attention to that stuff.

> We made some changes so everyone, whenever they open any template on EHR, you can see if they have any goals. All of their self-management goals are listed on that home page. So that's something that we just started this year.

> We developed some tools that brought the MAs along and allowed them to participate a little better, at least help the providers get some of the self-management goals recorded. And now we have, within our EHR, a tool that we can document ongoing status reports of where people are with their self-management goals.

Challenges

Site leaders at demonstration FQHCs discussed several challenges to implementing self-management within all patient visits.

Automating information flow for self-care. Respondents raised issues related to automating information flow needed for providing self-care support. A central challenge was the need to customize the EHR to record self-management goals, and the frequent lack of capability within the EHR to track progress on goals from visit to visit.

> We're still struggling with having the providers clearly document that they've discussed it, that they've set a plan, and then that they're actually following with that plan. We'll be able to find some documentation, let's just say of, you know, they discussed weight loss and the patient decided they wanted to lose ten pounds in the next six months. So we may find some very detailed information on that, but that next piece of the follow-up, how are they doing on the weight loss, is not always clearly documented. You know, [the patient] may come in two or three times and you don't see anything about, did they lose weight, gain weight? Was there a conversation about, are they exercising, are they not exercising? You know, those sort of things. So I think the providers all include the patient in giving them goals and having plans in place, but I don't think that we still have that appropriate or adequate documentation of the follow-up piece on that.

Provider engagement. Another difficulty was getting providers to engage with patients around self-management. Respondents discussed ways in which both providers

and patients were reluctant about "being fully engaged" in self-management, in part because it was a different type of care experience than most were accustomed to.

> I think one of the greater challenges and probably the greater challenge for health care centers is to have enough resources to really communicate well with the patient. So, communicating on preventive services, communicating on activities that need to happen to keep them healthy, so that when the patient is actually here with us and we're providing care and we're taking care of getting them referrals and so forth, that's inherent, I think, in what primary care providers do a lot of times. Those other pieces that are the ones that we have been challenged with, trying to make sure that we have enough resources to proactively do those other activities.
>
> The other [activity we are working on] is setting self-management goals. I think in their practice, that's one of their biggest shifts. Most of the providers were not setting self-management goals with patients. I think, where we've been focusing, making sure that the tools are available and that the team is actually working with the patient to develop self-management goals and then following up on them and supporting them in their goals.
>
> [Self-management] has been a harder piece for us. We've been documenting it, but I think it just kind of is about that. It's just like, "I need to fill this box; what do you want to do? Drink more water? OK." Like, I don't think the process is being fully engaged.

Patient language and literacy barriers. Finally, patient language and literacy barriers (e.g., limited health knowledge and understanding, lack of self-management materials in a patient's native language) made supporting self-management more challenging for FQHCs in the demonstration than it likely would have been for other categories of health care providers.

> A lot of our patients, they really don't think about the chronic things. They only come in when they're hurting. But that's still an ongoing process of getting the patients involved in their care. That's a major thing, patient-centered medical home. So we're still struggling through that in educating the patient on the importance of coming in for their screening exams, following up on our orders and recommendations.
>
> What we have found also, to make things even more complicated, is that a lot of [the non–English-speaking] population is illiterate as far as reading and writing. So the communication, in a sense, has to be verbal. So, even if you have some materials that you've translated in written form, you give them to the folks but it's not going to help.
>
> Q: Are there situations where, due to differences between patient populations, there's some persistent tailoring that has really become stable across different sites?
>
> A: Well, I think one of the differences [for unique patient populations] is the visit summary can only be printed in English. So, how we manage it with patients who—

> Q: Is that a function of your EHR?
>
> A: Yes . . . So, there are couple of things. One is that, if a patient is not literate in any language, then you're reviewing it with them and they take it with them. If they're literate in Spanish, they can make their own notes as a Spanish-speaking staff member reviews it with them.

Facilitators and Strategies

Improving EHR functionality. The EHR and aspects of the EHR's functionality were discussed as facilitating patient self-management by providing a way to document and track self-management goals. One site respondent described a "home page" that was added to the EHR that summarized the care plan, including self-management goals. This facilitated all members of the care team in being able to orient themselves quickly to the priorities for the patient and the visit.

> I think that the health education piece and care goals, the care coordination, having the homepage has really helped with that. So I don't think we've had that many challenges with documentation. I think all the requirements are kind of in line with what we're already doing and have to do for meaningful use, so we've kind of already gotten our feet wet with that.

Another respondent described how the self-management workflow module that was added to the EHR provides a structure—almost a script—for the self-management conversations. This respondent noted that patients found the questions odd at first, but because they are being asked the same things at every visit, even across providers, they now expect to spend part of their visit having a conversation about their self-management goals.

> I think a lot of that providers—again, they were doing it but weren't properly documenting it. Now we have a way to, if we go in and check—that we're all on the same page, we're all doing it equally. And I think patients, if they see me, when they see another provider, they kind of expect that this is—we're all doing it equally. I think that's what's changed a lot, which is good, for the better, because patients are now knowing, "OK, I'm going to get my self-care package," I call it, like your self-care plan, and they're expecting it and they expect it from the other providers as well. So we're all doing that equally.

Hiring more staff. Site respondents also described hiring and supporting additional staff for patient education:

> Well, our support staff also helps follow on [with] those patients who missed their appointments. They also help provide patient education; for example, medical assistants will provide basic patient education, depending on the patient's chronic condition. Maybe the patient has diabetes—a medical assistant would provide some education to these patients, in terms of taking care of their diabetes.

Some respondents discussed varying methods and tools for engaging and empowering patient self-management (e.g., "toolkits" to organize care plans and documents and sorting through medication bottles).

> We have a huge focus on not only "know what your meds are and let your doctor know if you're [seeing other doctors], but bring that list in." Or we give them little toolkits [bags] and they can bring their bottles in. Because what we found when we e-prescribed is that's fine on our side, but [patients] still have to have some understanding of [their medicators] . . . So we do the toolkits, and they receive education on that.

> I think we're providing them more self-management tools. Before, we may just jot something on the note, but now everything is printed out. We have . . . a patient wellness handout, which has all of their information, and that's their active medication list, their problem list, and recent labs are also pulled up onto that. Patients really appreciate that, especially my patients who travel a lot, I'll print it out and say, "Please take this," and I'll explain what it is.

Experience of Comparison Sites

Practice changes. In contrast with most demonstration site leaders who described practice changes relating to patient self-management, no comparison site leaders mentioned practice changes around this topic.

Challenges. Two respondents from comparison sites referred to challenges in implementing self-management support, but they were not as detailed in their description of the challenges as demonstration sites.

Facilitators and strategies. Some comparison site respondents mentioned establishing a committee or department to conduct formal patient education to engage and empower patients in self-managing their care; these respondents discussed hiring patient educators (e.g., nurse home visitors) and care managers specifically to assist with the training. Some demonstration site respondents indicated that they had such groups already established but did not discuss as a new change.

Exhibit A11.9. Summary of Challenges and Strategies Around Self-Management Support

Type of Challenge	Specific Example	Specific Aspect of PCMH that Affects Challenge	Specific Aspect of FQHC that Affects Challenge	Solution Strategies or Facilitators that Reduce or Resolve Challenges
Automating information flow to support self-management	• Need to customize EHR • Lack of EHR capabilities to record and track self-management across visits	• Not reported	• Not reported	• Not reported
Lack of patient engagement in self-management	• Patients not used to being asked about self-management • Patient priorities not focused on self-care	• Not reported	• Not reported	• Not reported
Lack of provider engagement in self-management	• Some providers resistant to implementing patient-directed care models	• Not reported	• Not reported	• Not reported

SOURCE: RAND analyses of qualitative interviews from demonstration and comparison FQHCs.

Community Resource Linking

Practice Changes

Coordination with social services. Site respondents described attempts at relationship-building and coordination with social services and other ways to bridge the patient experience between the clinic and social service providers (see Exhibit A11.10).

Recording nonmedical supports in the EHR. Respondents also noted the importance of recording in EHR the nonmedical supports that patients were receiving from the FQHC (e.g., transportation and medication assistance), and how they attempted to collect this information.

> We've been able to put together some arrangements where, right now, we're working on things in terms of local teaching programs to familiarize at least the residents in terms of being able to . . . gain entry into the safety net programs. We've done things with the local community to make sure that, if we can reach out through any social

> services or not-for-profit other than ourselves, to make sure that they're available to our patients. And, I mean, nothing is a silver bullet to solve the problem but try to maximize the coordination.
>
> There [were] also components of the way we documented the additional services that we provided. So, as a community health center, [we] really had a commitment to working with higher-need patients, but didn't always document that in the same way in our electronic health records . . . like enrollment and prescription assistance programs, for example, or transportation support to visits outside the health center.

Challenges

Lack of information about social services. One FQHC described the challenge of referring patients to social services without knowing what happened after the referral. For providers at this site, lack of information about what services were provided or what actually happened for the patient led providers to feel like the referral was not worth making because they were unsure of its value.

> Family support would come to a provider meeting, explain what they did. The people would be like, "yeah, yeah, OK." They'd do an occasional referral. They had no idea what happened, because it was nowhere in our chart. The patient would come back and go, "um . . ." and so then people were like, "well, I'm not going to refer. I don't know what they're doing. It's taking my time to do this referral and then they come back and they don't even know what happened."

Facilitators and Strategies

Awareness of community resources. In the context of community resource linking, demonstration FQHC respondents described awareness of community programs and, ideally, relationships with community resources as facilitators of successful connections between patients and external supports.

Using patients' health educators. One site respondent described using their patients' health educators to help connect patients with social services. Their *promotoras* were positioned to be highly visible to patients and were equipped primarily to handle navigating health insurance options for the uninsured.

> When we built the new building and have a *promotora* in each hallway . . . and we introduced them like, "This is the *promotora* who's a part of the patient care teams for this doctor and this doctor." . . . So then, as the patient was walking out to check out—or if [the provider] recognized when [they] were trying to decide what to do with care, and [the patient would] say, "Oh, I actually don't have insurance." "Have you seen anybody to get insurance?" "Oh . . . " [and the *promotora* would] get them set up.

Experience of Comparison Sites

Practice changes. Comparison site respondents made no reference to community resource linking.

Challenges. Comparison site respondents made no reference to challenges faced when trying to implement community resource linking.

Facilitators and strategies. A respondent for one comparison site described a program that tightened the connection between the clinic visit and pharmacy services for patients who needed a prescription. This FQHC had an agreement with a nearby pharmacy to hire a "runner" to deliver newly prescribed medications to the patient at the clinic before the patient left the visit. This arrangement with the pharmacy addressed the problem of patients failing to follow up to get a prescription filled.

Exhibit A11.10. Summary of Challenges and Strategies Around Community Resource Linking

Type of Challenge	Specific Example	Specific Aspect of PCMH that Affects Challenge	Specific Aspect of FQHC that Affects Challenge	Solution Strategies or Facilitators that Reduce or Resolve Challenges
Lack of information-sharing between medical and social services	• Providers who referred patients were unaware of what resulted	• Not reported	• Not reported	• Not reported
Clinical infrastructure not designed to address social needs	• No place in the EHR or policy for document referrals to social services	• Not reported	• Commitment to work with high need patients	• Not reported
Lack of provider knowledge about community resources	• Not reported	• Not reported	• Not reported	• Education for residents about community resources • Use of health educator/*promotora* model where one highly visible member of the care team is the point person for connections and referrals

SOURCE: RAND analyses of qualitative interviews from demonstration and comparison FQHCs.

NCQA Domain Five: Track and Coordinate Care

Tracking, Following Up on, and Coordinating Hospital Discharge

Practice Changes

Establishing processes for tracking and coordinating hospitalizations and discharges. Site leaders at demonstration FQHCs described processes for tracking and coordinating the hospitalization and discharges of their patients (see Exhibit A11.11). Respondents emphasized the staff time required to track patients when they had hospital encounters (i.e., emergency room use, hospital admissions), including when they were treated or discharged. In describing how hospital tracking was accomplished, respondents often noted that this task was assigned to the person in charge of specialist referral tracking. Hiring a new staff person to take on this responsibility was common.

> In [one of our clinics], we have a case manager. So, she was able to develop a relationship with the different hospitals and have the access to the portal, for example, for [one of the nearby hospitals]. So, every day, she would check the census and see if any of our patients was admitted and then get the records and try to coordinate care.

Integration of clinic and hospital EHRs. Demonstration FQHCs made other changes in the course of implementing hospital tracking and coordination. Integration of clinic and local hospital EHRs was a change made at some sites. Many site respondents also described working to build relationships between FQHC and hospital care coordination staff.

Challenges

Difficulty in implementing workflows. Some site respondents reported good relationships and information flows with local hospitals, often due to the efforts of care coordinator or care manager staff at FQHCs. However, even when this relationship or information-sharing arrangements were discussed as strengths, the workflows described by respondents were far from effortless. Systems for tracking hospitalizations and discharges were often staff-intensive.

> That's still a challenge. In [one of our urban clinics], we have a case manager. So, he was able to develop a relationship with the different hospitals and have the access to the portal, for example, for [Regional Hospital], which is one of the hospitals out there. So, every day, he would check the census and see if any of our patients [were] admitted and then get the records and try to coordinate care. We don't have that in [our larger city site]. I mean, the nurses, as best they can when they get the charge summary, they follow up. And when we send patients to the hospital, we follow up. But we don't have that access to the hospital records.

> It's one person's full-time job to chase that information and you're chasing an unknown because you don't know if someone went in there [to the ER] or not, because you're trying to figure out, "did someone go and they don't want their primary care provider to know?"

Limited integration with hospitals. Respondents often mentioned their hope for hospital tracking and coordination, which is an integrated EHR. The fact that this has not been realized, and that limited integration is the norm, has also been a challenge to implementing efficient and effective tracking of patient hospitalizations. A few FQHC respondents mentioned the costs of creating and managing electronic interfaces across multiple systems.

> Interfaces are never free. Making the systems talk to each other is going to require investment. Such interfaces end up costing us money.

> We're still talking about making our EMRs talk. Some of the hospital information is coming back to us more consistently, which is nice, but unfortunately it's still on, like, paper or fax. As far as the EMRs, they're not directly integrated per se. But we're working on that.

Facilitators and Strategies

Strong relationships with hospitals. Relationships with hospitals—including hospitalists and hospitals' care managers—were mentioned as important to establishing and maintaining functional processes. One way to facilitate this relationship-building was to hire dedicated clinic staff who could do outreach and hospital discharge coordination. Other sites benefited from high levels of interest in care coordination from hospitals, which are also increasingly expected to manage patients after discharge. In this way, the practice change that was required by the PCMH transformation was facilitated by a broader shift of attention to improving hospital follow-up and reducing readmissions.

> It's still on fax and it's through email but we're getting the discharges, the emergency room discharges, the hospital discharges, and things have been very consistent so we're very happy with that. We have folks in the hospital that work directly with our transition team at the sites so there's some communication, some handoff, as well as we've just started a demonstration where some of the hospital folks actually have access to our [EHR] and that we're working on that with the hospital so they can do in directly and make appointments.

> [The hospitals are] fairly motivated on their side . . . It's not like, "well, those are your things you're working on, it's not really important to us." . . . They have measures on readmissions, that's [also] a big thing for us and being able to track readmissions and performance improvement and making sure that we're managing those patients well. So that helps the hospital as well, that we keep [patients] out of the hospital and that we have processes to follow up with them quickly. So all of that I think is good groundwork to build relationships.

A valuable product of having a strong relationship with local hospitals is that the FQHC gains access to the hospital's EHR system. There was a lot of variation in whether or how demonstration FQHCs had access to hospitals' systems. Many respondents described good EHR integration with some community hospitals but no integration whatsoever with other hospitals. When integration was possible, it was a strong facilitator of the FQHC's ability to coordinate and track their patients' hospital encounters. As one respondent noted, when the EHR is integrated, "Coordinating is no longer a paper trail and is automatically seen within the patient chart."

> We have really fairly good relations with [one hospital]. So, for instance, they allow us to get into their computer system. They give us access to that . . .
>
> So if [one of our patients] goes to the ER [emergency room], for instance, we can just log in, we can print out the summary, we can look up labs if need to.
>
> I was going to say, one of our managed care organizations, in the last two years, has made some wonderful work of sharing that information, and we get reports of who's been in the ER and we get reports of hospitalization.
>
> There's another small hospital [in our region] . . . They're on a different computer system, but most of the patients go to the [local hospital system and their specialists]. So we have immediate access to the [integrated] EHR. I mean you can go in and pull it up, you can see it right then and there. So, that's one of the big advantages that we have, and that made PCMH a lot smoother. I know some people that don't have that.

Experience of Comparison Sites

Practice changes. Comparison site respondents did not describe in detail how they addressed hospital tracking and discharge coordination. Overall, their discussion reflected less active coordination with hospitals than described for demonstration sites.

Challenges. The challenges to hospital tracking and coordination noted by site leaders were similar across demonstration and comparison FQHCs. Unlike demonstration site respondents, comparison site respondents did not discuss processes and workflows they had implemented, and discussed challenges with less specificity than for demonstration sites.

Facilitators and strategies. Similar to demonstration sites, comparison site respondents underscored the importance of developing strong relationships with hospitals to gain access to hospitals' EHR systems. Like demonstration site respondents, comparison FQHC respondents described a number of different arrangements with local hospitals—from full EHR integration; to ER staff knowing about the clinic; to formal, nonautomated notification arrangements by hospital staff—to track their patients when they were treated in the ER or admitted.

Exhibit A11.11. Summary of Challenges and Strategies Around Tracking, Following Up on, and Coordinating Hospital Discharge

Type of Challenge	Specific Example	Specific Aspect of PCMH that Affects Challenge	Specific Aspect of FQHC that Affects Challenge	Solution Strategies or Facilitators that Reduce or Resolve Challenges
Limited staff resources	• Time-intensive process for staff	• Not reported	• FQHCs typically have limited resources for additional staff or time for tracking and coordinating care with hospitals	• Hire dedicated referral clerks/specialists • Hospitals' vested interest in care coordination (e.g., reduce readmissions) that predisposed them to cooperate with or reach out to clinics' efforts
Suboptimal communication channels with hospitals	• Lack of EHR integration • Hospitals do not always notify clinics when their patients are admitted	• Not reported	• Not reported	• Develop relationships with hospital leaders, care management, and discharge staff

SOURCE: RAND analyses of qualitative interviews from demonstration and comparison FQHCs.

Tracking, Following Up on, and Coordinating Specialty Care and Testing

Practice Changes

Improvements to existing procedures for tracking tests and specialists. Site respondents described the systems and processes they developed for tracking referrals for tests and specialists. To be done in a way that complied with PCMH standards, many respondents described tweaking or improving existing procedures (see Exhibit A11.12).

> We actually recognized that that was a problem with follow-up a couple of years ago and so we really hammered out the referral process. We made a policy, got a procedure. We trained all the referral clerks in how we needed to do it. . . . So, that policy had already been made, but then for PCMH, we had to go in and put some time frames on it and identify exactly who was doing—you know, it was like, just tweak them a little bit.

Changes to EHR. Changes to EHR systems and/or their use (at sites that previously used another process) were common ways that sites implemented comprehensive referral tracking and follow-up. Training staff to be consistent about where referrals were documented in the EHR and the use of software, such as i2iTracks, are two examples of how practice changes related to referral tracking involved the EHR.

Changes to process workflows. Site respondents described their processes or workflows around referral tracking and follow-up, which varied across sites with regard

to which staff were involved. Respondents sometimes mentioned hiring new staff to support specialist and referral tracking, due to the time-intensiveness of the process, but other sites relied on existing members of the care team to take on these responsibilities.

> [Referrals all go] through the referral clerk, they set the appointment, set the date in the computer. When the appointment date is passed, the computer pulls the date up and reminds the referral clerk to follow it and then they send the notes. So, the other thing that's great, of course, with EHR is that you can electronically timestamp, like, "yes, this was when it was in." "Yes, this is when the provider was seen." "Yes, this is what was done about it," and it's really easily trackable.

> We have two PCPs, and we have one in the morning, she will do all the referrals and pre-approvals. And then we have one locked away, she would just gather reports and attach them and send them to the providers. So that helped a lot. Instead of having both of them seeing patients throughout the day, one in the morning will see everyone's patients, Dr. X and so forth. And the other one will lock herself away, just calling to . . . reconcile all the open orders.

Enhanced relationships with specialists. Site leaders from the demonstration FQHCs described efforts to build relationships and connections with specialists to foster follow-up and tracking. Integration with specialists' EHRs was often described as a goal, and some sites were able to attain this level of access.

> Our regional practice managers and the local operations people have been very proactive with reaching out [to specialists]. If they know that a certain group sees a lot of our patients, you know, they're going to them and say, "OK, here's a list of our patients who were referred to you in the last month. Can we get their reports, instead of calling one off?" So, we're finding really creative ways and efficient ways of doing it.

> We try to reach out to outside providers to get their advice on tracking consultation reports from specialists. I think the whole community faces the same problem. Sometimes it's hard to get consultation reports back, though we try very hard. Then some of our senior staff talk to some of the specialists, some may do better after we talk to them, some may not. So we try to refer patients to those specialists who are better sending us reports.

> We have really fairly good relations with [one of the two hospital systems in our community]. So, for instance, they allow us to get into their computer system. . . . If [our patients] go to the ER, for instance, we can just log in, we can print out the summary, we can look up labs if we need to. [With the other hospital system] we haven't had that capability, but actually it's on my to-do list to reach out to them to see if we can facilitate that.

Challenges

Challenges to tracking and following up on referrals to specialty care included the time burden or staffing challenge; difficulty getting information back from specialists;

and the relationship between referral tracking, specialist access, and patient characteristics.

Follow-up with specialists. Following up with specialists was time-consuming and was described as a "human" or "paper" process; lack of electronic records integration was a challenge for many sites.

> I would definitely say tracking referrals and tracking lab tests or imaging tests [is] hard to maintain. It takes a lot of our staff time.
>
> You wish [specialists] would just automatically send us back [patient results]. And we give them the information to do that. "Here's our fax number." . . . They just don't. So it's time-consuming, that piece. In fact, my triage nurse, when she had down time, . . . I said, "Oh, good." I gave her the book. I said, "Here's the logbook." You know, and so that's what she does. She sits in there and she calls the doctors and says, "I need the referral. This patient show up that day? Yes, they did? Well, then would you please send us [the report]?" And so she's catching them up because they're getting behind.
>
> And the coordination of care across the continuum—and over time too, but mostly the continuum—it's been a challenge for us. You know, we are not a single site with a single hospital partner. I haven't counted how many hospital partners we have across our organization, but it's upwards of 20, and a number of specialists in all the different communities we're in.

Lack of specialist access and patient factors. Site respondents also identified lack of specialist access and patient factors as challenges to referral tracking and coordination, alluding to FQHC patients having barriers to specialist care that affect their likelihood of using a referral and therefore allowing the site to "close the loop" as required by PCMH.

> I think [specialist access and referral tracking are] linked, you know. If it's hard for us to get access to the specialists, then it's hard for us to close the loop on that referral, right, because then the appointment is just waiting to be completed. So it's a lot of work on our end to try to get patients into, you know, specialists who will see them, but then tracking down the, you know, consult note takes up a separate amount of time.
>
> I think referrals management is something that we've been talking about recently. I think, you know, PCMH, the way it's written definitely puts a lot of responsibility on providers to follow up and it's understandable. But it's very, very tough when you have a population such as ours. So I think that is a challenge and will continue to be a little bit of a challenge.
>
> A: As soon as you refer them, even if it's something they really need, I think you double the chances of having it done if you just [provide the specialty care or testing at the FQHC, rather than referring a patient to an outside provider] because if you refer them, I think half of them don't go.
>
> Q: So a cold [first-time external] referral is at least 50 percent no-show?
>
> A: I think. Sometimes it's higher, sometimes it's lower. It depends on what it is. If it's a blood draw or a tissue sample, it's probably [fewer] of

> them go; if it's referral to a specialist that they can't get in right away, then it's like, they're just not going to go.

Facilitators and Strategies

Hiring referral coordinators or establishing the position for existing staff. For specialist tracking, sites found that hiring dedicated referral coordinators or having established these positions or relationships in the past greatly improved coordination with specialists. Several site respondents described how highly motivated referral coordinators were very effective in ensuring that patients received specialty care or lab services. Having persistent administrative staff who followed up with specialists' offices to get patient records and results returned to the clinic helped facilitate the tracking of specialty care. After patient records were returned, respondents described the occasional need to use additional personnel to scan documents and integrate them into the EHR.

> [Our referral coordinator,] she takes it to that [level], you know, she follows it. She sends that referral out. If she doesn't hear back, she's back on the phone with [the patient], sending them letters, calling them and then she gets it scheduled.

> Some of the specialists are really good about getting the information back to us. And our referral department, as well, is good about always getting that out to the folks.

Use of EHR for referral tracking. Some respondents described the role of the EHR or other software as a tool for referral tracking.

> They also use i2iTracks here. That has helped the referral process stay on top of those that haven't had their appointment. And they use those for follow-up phone calls. And the tracking system probably was put in place about the time that they started with the 2011 development. So that's been really successful. So every referral coordinator on a team is working that actively all day long.

Experience of Comparison Sites

Practice changes. Demonstration and comparison site respondents noted similar themes regarding practice changes made to improve specialist tracking and coordination. Demonstration site leaders commented about the development of relationships with specialists, an issue which was not raised in the comparison site leader interviews.

Challenges. Demonstration site respondents were more detailed in their descriptions of the challenges they faced in referral tracking. In contrast to comparison sites, demonstration site respondents made reference to systems they had in place for referral tracking (in EHR, and staff workflow).

Facilitators and strategies. Similar to demonstration sites, comparison site respondents mentioned hiring referral specialists/coordinators or using MAs/nurses to track referrals for each provider team and to follow up with referrals. A respondent from

one comparison site discussed monthly reporting on the rate of referral completions, which the respondent said was part of HRSA requirements. This strategy was not mentioned by respondents from other sites.

Exhibit A11.12. Summary of Challenges and Strategies Around Tracking, Following Up on, and Coordinating Specialty Care and Testing

Type of Challenge	Specific Example	Specific Aspect of PCMH that Affects Challenge	Specific Aspect of FQHC that Affects Challenge	Solution Strategies or Facilitators that Reduce or Resolve Challenges
Staff burden	• Staff time required to track referrals	• Not reported	• FQHCs typically have limited resources for additional staff or time for tracking specialty care or diagnostic testing	• Hire dedicated referral clerks/ specialists
Information-sharing by specialists	• Specialists do not always readily send back results, challenge of chasing down documentation • Large numbers and range of specialty providers that patients use create challenges in developing a working relationship with more than a few	• Not reported	• Not reported	• Develop relationships with frequently used specialty providers or specialty networks
Patient factors	• Patients do not always have access to specialty care (see also Specialty Access under Domain One) • Patients may have transportation or work scheduling challenges that make it less likely that they will use a referral for care	• Not reported	• Not reported	• Not reported

SOURCE: RAND analyses of qualitative interviews from demonstration and comparison FQHCs.

NCQA Domain Six: Measure and Improve Performance

Quality Monitoring and Improvement Systems

Practice Changes

Establishing and improving upon QI reporting tools. Demonstration site respondents described instituting and improving upon existing reporting tools to publish performance data. Respondents also described convening meetings or teams around QI efforts. The work of measuring and improving performance was often described as "drilling down" in the data to understand bottlenecks or weak points within the organization. Other approaches included close examination of challenging processes and focusing attention on a specific practice area until improvements were made (Exhibit A11.13).

> And we also run reports on a monthly basis and try to case manage those patients so that they can come in and be seen by our primary care providers. . . . We established a utilization review and utilization management session within [our EHR] so we're able to get this information.

> We also monitor a lot of performance on a monthly basis through our managers meetings so we all know what our continuity of care is and our empanelment size. We recently had to cap a provider who has reached capacity and then deal with how we're going to work with our front desk to direct patients to our other providers. So that monitoring has been very useful.

> But I've noticed—there were some things where I was just doing it in clinic as a whole, like the telephone notes, the same-day clinical advice, I would just do it as a whole. I'd say, "OK, we're not meeting this," and so there would be months where we weren't meeting the measure and so finally I was like, you know, I need to break this down by provider, see what their patterns are, to see why this is not happening. So for some providers it was because their medical assistant wouldn't check their notifications in time to call the patient within the same day, or there was a pattern with some providers not just making a thorough enough note. So it really gave me the ability to look and see who is doing well, who's not, and then you have the ability to say, "Hey, can we improve this?"

Challenges

Need for buy-in on QI efforts. The main challenges to performance measurement and improvement activities related to site QI efforts and the use of reports to provide feedback to employees and hold them accountable. Site respondents were concerned about doing QI in a way that would garner buy-in and be integral to the maintenance or sustainability of PCMH practices, rather than in a way that alienated providers or that would be easy to discontinue without key staff champions. Below are three strategies that sites used to address the challenge of insufficient staff to support QI initiatives.

> I think the reports are . . . supporting that maintenance of the practices, because people are getting monthly reports that say, you know, so, when we start seeing the care plan isn't being given or isn't being documented, what's going on? It's a trigger to look at it.
>
> Our process was . . . [to contact] sites to tell them, "you're not doing what you could be doing. You need to do better." We were nagging, cajoling, hocking them, depending on what tradition you come from, and were getting a lot of pushback of, you know, "this is too centralized."

Facilitators and Strategies

Friendly competition. Demonstration FQHC respondents capitalized on a dynamic of "friendly competition" within sites to motivate care teams to improve outcomes.

> So [in our competition], each provider was their own country and when they won, when they were the most improved provider, they then chose from certain groups of staff members, medical assistants, front desk, physical and mental health, some admin folks [who] would run reports from them. They would choose their team winners who got to participate with them in the spoils and recognition. So that kind of incentivized the MAs and the front staff to be a little more engaged in reminding the provider or reminding the patient to do things because they wanted to win too. It was fun.

Feedback reports for providers and staff. Several demonstration respondents mentioned the importance of generating feedback reports for providers and staff to measure and improve performance. Site respondents pointed to having the support of a larger health care network to help generate reports was helpful, as well as sharing reports among organizations.

> Yeah, and we're part of a health choice network, which is . . . multiple health centers that belong to [a professional network in our state] and so we have a big support group there of not only helping on initiatives like PCMH and trying to help us generate reporting and so forth, but also meaningful use and all of those kind of things. So the reporting side and being able to pull that and provide that to staff is much easier for us than it would be probably for somebody with a stand-alone system somewhere. We have nice dashboards that they create for us and we can just access those easily and look at data. So we're fortunate in that regard.
>
> One of our managed care organizations, in the last two years, has made some wonderful work of sharing that information, and we get reports of who's been in the ER and we get reports of hospitalization.

Using EHR to demonstrate clinical outcomes. Other respondents reported the use of EHR to pull data in order to demonstrate clinic outcomes, such as the process one site respondent described that links EHR data to reporting to the PCMH transformation:

> I really think, for us, the key thing was being able to extract data (from the EMR) into our reporting database and generate reports to help drive change.

At baseline, several demonstration respondents mentioned the importance of using a PCMH survey for their patient-experience surveys, which was one data point not drawn from the EHR that they used to track QI efforts.

> We've been doing patient surveys forever. We just switched to the patient-centered survey last year. So you have some historical data you can compare things to . . . We'll be able to tell, for example, if the portal improves communication. Hopefully, that'll be reflected in the patient satisfaction survey. It should help us pinpoint changes and successes.

Tools for measuring and improving performance. Finally, some site respondents described tools, such as a "workbook" of compiled QI measures or dashboarding software that integrated with the EHR, that they already used or implemented as part of the demonstration to help measure and improve performance.

> So [the workbook is a] nice location to just track everything. The table of contents is sorted, so, depending on what you're in it for, you can determine what you want to look at. If you just want to take a look at access, you can go by monitoring topic or if you just want to look at GPRA [Government Performance and Results Act], you can look at GPRA, or if you want to go by the PCMH standards.

Experience of Comparison Sites

Practice changes. Comparison site respondents, in contrast with demonstration sites, described fewer formal processes, such as committees, as well as reporting tools and techniques. A few comparison respondents stated that they were either just beginning formal QI efforts or were doing major revisions of their existing processes.

Challenges. Demonstration site respondents had discussed how QI efforts were staffed and structured (teams, meetings), and about how the demonstration spurred them into action. Both comparison site leaders who mentioned the challenge of measuring and improving performance talked about how their sites were at the beginning stages of QI efforts.

Facilitators and strategies. Respondents from comparison FQHCs did not describe or comment on facilitators of measuring/improving performance.

Exhibit A11.13. Summary of Challenges and Strategies Around Measuring/Improving Performance

Type of Challenge	Specific Example	Specific Aspect of PCMH that Affects Challenge	Specific Aspect of FQHC that Affects Challenge	Solution Strategies or Facilitators that Reduce or Resolve Challenges
Need to positively engage care teams in QI	• Concerns about alienating providers by reporting on quality measures	• Not reported	• Not reported	• Leveraging friendly competition to motivate and engage care teams
Tensions between local and centralized QI efforts	• Pushback from providers and sites who felt the process was too centralized	• Not reported	• Multisite FQHCs often have centralized QI teams	• Engaging wide range of staff within each site in QI efforts

SOURCE: RAND analyses of qualitative interviews from demonstration and comparison FQHCs.

Consistent Documentation of Care

Consistent documentation of care is not explicitly included as a PCMH practice element in the NCQA 2008 standards model. However, a number of demonstration site respondents described this as essential to ensuring that EHR data can be reliably used for quality monitoring and performance improvement, as well as to facilitate efficient use of patient records by clinical staff. This was dependent on both staff practices/habits of EHR use and the technical functionality of the EHR system (see Exhibit A11.14).

Practice Changes

Consistency in documenting care in the EHR. Site leaders at demonstration FQHCs discussed how the PCMH transformation prompted staff to be more consistent about documenting care in the EHR, with regard to both how they documented care and documenting (or verifying) the same things for all patients at every visit. Respondents described building workflows into the EHR to make consistent documentation more intuitive or less burdensome for providers. Also, as with many practice changes, respondents often noted that sites have an existing practice of documenting care, but that PCMH transformation and NCQA requirements compelled them to enhance or improve their practices.

> People were very interested at the beginning, saying why [our EHR] didn't work, which then allowed us to have a conversation about "well, why are we all documenting differently." So then we made a bundle . . . Like, we had a Men's Health bundle, so if you are doing a rectal exam, a prostate exam, a PSA screening, you do your fecal occult blood test, if all that's happening, and we're like, "Well, yeah . . ." all the providers are in agreement that we all do it, it's just an easier way to document it. It's like a bundle of CPT [current procedural terminology]

> and ICD-9 code where you can unclick if you didn't do it for whatever reason. So that in itself helped, and then all the providers started doing it that way.
>
> My sense is [the changes we made were] really more documenting things that we were already doing. You know, we had an electronic health record. As an FQHC, we had all the rules about patient engagement and quality measures and things. . . . So, you know, we had a lot of best practices, and we had achieved a lot of the workflow changes that accomplish the medical home initiative, but I couldn't say that we were universally applying those in all of our practices, and that was something that came out of that first round of work and continues to be a part of what we do.

Challenges

Challenges to consistently documenting care included difficulty in achieving consensus on how to document different types of care and in training, monitoring, and reminding providers to document consistently; lack of templates or EHR infrastructure to make documentation fit well within the clinical workflow; and the time required to record information in the EHR.

Need for better consistency in documentation across organizations. Site respondents discussed how challenging it was to create consistency in documentation practices across their organizations, with providers often being identified as the weak links in implementation. Providers' failure to consistently document in the appropriate manner was attributed to their busy schedules and competing priorities.

> I think the biggest hurdle is because we're such a busy clinic. The doctors, they're like, "well, I'm already discussing it with the patient," but sometimes that's just not enough. You have to write that data. You have to write the input . . . so it's just trying to make sure that the provider is being trained effectively on where to input it so that they didn't feel like they were doing redundant work.
>
> There's so many documentation requirements that are being put on providers now. And with the fact that, being an FQHC, we don't have all that staffing, ancillary staff, to really assist the providers in doing all the documentation. So I think that may be a problem going down the line.
>
> We were on Medical Manager prior to going on to Intergy or Vitera, and as with anything, when it's a major change, it's a matter of getting everybody familiar with the product, learning the shortcuts, which is a big thing, and just being able to navigate through both ends of the system. There's a lot of really, really neat things that come with an effective EHR. Prescription checks, checking for alternates, checking for allergies—doctors are infamous for their horrible handwriting, and doing everything electronically, and all of our providers are now 100 percent.

Reducing burden of documentation. Most strategies to support consistent documentation of care in the demonstration FQHCs centered on reducing the burden of documentation. Respondents described changes made to the EHR to make documentation easier for the care teams.

> I think it's still a challenge with the documentation. I think we kind of had to figure out what worked with EHR and what we can capture with EHR and the easiest way to do it, so it did affect their workflow a little bit. But we've been able to do OK with it. I think that the health education piece and care goals, the care coordination, having the [EHR] homepage has really helped with that.

> We had to do quite a bit of adapting on the templates, work with our reminder system. . . . That of course requires time off the floor to train the providers and the staff. Trying not to impact patient care but still get them in front of a computer . . . and just work with them on, OK, logically, where would you want us to put this dialogue? How is this really going to work with your flow? So it's a lot more interaction between your typical IT brain and your clinical brain to try and make those tools useful.

Best practices on use of EHR. One demonstration FQHC site leader discussed a process of identifying best practices in the use of the EHR in a patient visit, then using that method as what was taught to new staff.

> We're starting back with documenting your exact workflow for documentation so that we can compare it with how we're training all the other MAs . . . Because you know how in those systems everybody has their own way. It's like, what is the optimum way to get through the system itself, yet get everything clicked that needs to be clicked? So, by them showing by their reports that they've improved all their numbers in all of those areas, they obviously have found a quicker way to click everything; so, how can we share that with other teams that get frustrated and don't [complete the appropriate documentation in the EHR]? So, it's now embedded into their training. But initially what we did was start with the providers, met with the providers to gain their buy-in. And then we went to the site and kind of shared, like, "This is a new workflow. And this is what it means to the front desk, to the medical assistant . . ."

Distributing responsibility for documentation across the care team. Another important strategy to support consistent documentation of care was distributing responsibility across the care team, in some cases augmenting the care team with specially trained MA scribes who focused on maintaining the EHR. One respondent described how the addition of a scribe in the care team increased productivity because the provider can focus more of their time on the patient.

> The productivity increases because the providers can do provider work. And so somebody else is doing the education, somebody else is typing up the note.

Use of sitewide data to engage providers in documentation. Finally, one site respondent described using sitewide data to engage providers about the importance of consistent documentation of, in this example, cancer screening. This site's strategy attempted to motivate providers by linking the small, routine actions of individual providers to the population management efforts of the larger organization.

> But what we found was that there was no consistent place where people were documenting a colonoscopy. So some docs wrote it into the medical history, some wrote it into the surgical history, some wrote it in the body of their note. There was no place we could consistently find it and pull it out and report it. So we had to come up with a way to do it and then teach everybody, you now have to do it this way. Which is, as you say, whether you call it a sell or a motivation, it's a, "Gee, this doesn't make it any better for me. I know where it is for my patients, I know who has gotten it and who hasn't." But to teach everybody to do it that way, to now invest the time to go back over the last ten years and find the colonoscopies that are somewhere else in the record and put them in the right place.

Experience of Comparison Sites

Practice changes. Comparison and demonstration site respondents noted similar themes with regard to changes made at their sites to support consistent documentation of care.

Challenges. Respondents from both groups also discussed how EHR functionality was sometimes an obstacle to consistent documentation of care. Demonstration site respondents raised the theme of the challenge of delivering consistent care to patients each time, which comparison site respondents did not discuss. Demonstration site respondents also emphasized provider education and monitoring to ensure documentation much more than comparison sites.

Facilitators. Similar to demonstration sites, comparison site respondents described using the EHR to facilitate consistent documentation of care, and the role of EHR training to help providers document care correctly.

Exhibit A11.14. Summary of Challenges and Strategies Around Consistent Documentation of Care

Type of Challenge	Specific Example	Specific Aspect of PCMH that Affects Challenge	Specific Aspect of FQHC that Affects Challenge	Solution Strategies or Facilitators that Reduce or Resolve Challenges
Maintaining consistent documentation throughout organization	• Need to train, monitor, and remind providers to document consistently • Need for buy-in from providers about utility of changes so that they will be motivated to maintain changes	• Not reported	• Not reported	• Not reported
EHR capabilities	• Not having correct templates in EHR • Need to customize workflow and defaults in EHR	• Not reported	• Not reported	• Not reported
Provider burden	• Time required to document appropriately in EHR • Requirement that providers learn new practices and adapt to using new systems	• Not reported	• Lack of adequate support staff	• Customizations to the EHR that made documentation more intuitive and better suited to clinical workflows • Distribution of documentation tasks throughout the care team, as possible

SOURCE: RAND analyses of qualitative interviews from demonstration and comparison FQHCs.

A12. Qualitative Detail Related to Challenges and Facilitators in Managing the NCQA Recognition Process

In this appendix, we provide additional qualitative detail and illustrations from site and PCA interviews about challenges and facilitators related to the NCQA recognition process, challenges and facilitators in managing the NCQA recognition application process, and the relationship of NCQA recognition to practice transformation. These issues are covered in Chapter Seven.

Here, we discuss the four main challenges and three facilitators relevant to managing the NCQA application process, as identified by demonstration FQHC respondents.

Challenges

Need to create processes and EHR systems to capture care practices and generate documentation for NCQA application. Challenges to the NCQA application process were sometimes because of problems involving other systems and processes at the site. For example, some demonstration site respondents said they had difficulty gathering the documents and reports required for the NCQA application. Depending on how the site recorded care practices in the EHR, and on the reporting functionality of the EHR, some sites invested a lot of time in getting the EHR set up to capture and report on care practices related to PCMH transformation. This challenge had two components. First, there was a need to train staff to enter information into the EHR in a way that was suitable for extraction (e.g., not in "free text" fields). Second, sites sometimes needed to work with IT services or EHR vendors to customize or get their systems to generate the reports needed for the NCQA application.

Many sites had experience with this process because of other quality reporting (e.g., HEDIS, Title X), but because the NCQA application asked for elements that sites were not already reporting, they often had to go back to the clinical care templates to customize how data were input and to build new reports. In some cases, the functionality required for NCQA reporting was more complex than what sites were using. For example, several site respondents identified the ability to track self-management goals and progress from visit to visit as a particular challenge due to the required functionality of the EHR. Consequently, some sites found it difficult to report on self-management processes for NCQA.

> Our system didn't come with that documentation in place, so [we are] having to build that in. . . . There was a lot of system development and

special forms and special codes and stuff that we had to use to be able to capture that built in the reports.

We had to go back and ask staff, and confirm, and say, "Hey, you can't document it there, there's no way we can pull that data. You've got to do it here."

Need to create new policies to support documentation for NCQA. As part of PCMH transformation, sites often needed to formalize their processes around PCMH practices, both so they could provide documentation to NCQA and to ensure that care practices were conducted consistently. When they did not have current or comprehensive policies in place, they needed to develop such policies, which could be time-consuming. Some site leaders appear to have felt frustrated by the need to document the existence of a clear policy in addition to demonstrating that the site was functioning as specified by the policy. However, other sites did not appear to struggle with this requirement, suggesting that some demonstration sites may have lacked the administrative leadership or experience with policy development that would have supported this process.

Some of the complaints about this requirement also appeared to focus on what sites perceived as the ambiguous nature of the NCQA requirements.

I think another big process change was documentation of processes. We always had relationships with specialists and we always process referrals through our e-clinical system, but the requirements of a patient-centered medical home, that you must document that you made a referral and then the time between the follow-up. It's not just enough to do the referral and call and say that you followed up on that referral, but have that documentation when you call and follow up on that referral, what information was stated as to why the patient didn't get the referral done and did that go back to the provider? And if so, what did the provider say? So just really having the processes more documented and the ability to prove what you're doing in the process, versus just having a process.

[As my colleague] mentioned, we've already been doing this for more than 20 years, 25 years. It's just that we needed to formalize it into policies and procedures, into workflows, into different things.

The emphasis on policies surrounding the EHR, I've had a lot of trouble with them, mostly it's writing of policies. I've actually had good documentation. I've been told by NCQA that we have good documentation surrounding our practices and have then been told, "But you didn't specify that [a particular detail of a care practice that NCQA requires] in your policy so we can't accept your documentation." Now, there's just not a lot of clear pictures on writing policies in the world of EHR. . . .

Q: Got you. So they not only want to see the documentation that comes out EHR, they also want to see . . . a written policy.

A: Exactly.

Q: OK. And so that, like you said, is really time-consuming.

> A: It's very laborious, yes, and takes up just so much time and resources that clinics just don't have. I mean, we have policies. But one of the examples is they wanted documentation that we send letters to patients of lab results. So I have all of that but they said that our policy didn't state how frequently those letters are mailed out. Well, who would even put that in a policy? So [someone] expecting this kind of level of policies just doesn't understand what kind of time constraints and resource constraints [we are under], especially a federally qualified health center like us.

Time-consuming nature of the NCQA application process. Respondents also described more generally the level of effort and amount of time required to gather and upload documentation and go through the application process. This was a significant volume of work, and the back-and-forth could stretch out for months, which made the process seem especially slow. Moreover, respondents complained that time spent on the application might have been better spent working with staff on transformation activities.

> I would say the amount of documentation, and I was sort of the head of putting all that together, I think it was valuable on some level but at some point I felt like if I had used all the time that I had to put all the documentation together to actually be working with providers, interdepartmentally, with mental health, dental, like if we could've used the time that it took to get all that dang paperwork together, actually working with other people on our staff, that that is value.

> I kind of feel like we've made a lot of progress, in terms of the transformation process, but in terms of the actual mechanics of the submission and the amount of work that goes into pulling together all the documentation and everything, I think I expected we would have been further along than we are.

Site respondents felt they had to be intentional and strategic about the "story" their documents "told" to clearly show that their site was meeting the standard. Perhaps in contrast with HEDIS or meaningful use reporting, PCMH recognition through NCQA attempts to evaluate the comprehensive implementation of the PCMH model within a practice and does this based solely on documents. Many of NCQA's PCMH elements focus on the interactions or dependencies between different components of practice. Sites that lacked necessary policies and practices might need more time, as described above.

It is possible that some clinic staff tasked with assembling applications did not have strong skills in communicating a comprehensive narrative while reporting on the more technical requirements of the NCQA application. Although TA provided by the demonstration should have addressed any deficits in this area, sites struggling to communicate their practice changes possibly did not take full advantage of the support; lower-resource sites may have focused on other aspects of practice change with PCA coaches and other TA contacts.

> [It was a challenge] to really have to upload some of that supporting documentation because it was fairly easy to step back from that tool and say, "Yeah, we do that. Yeah, we do that," and go through that fairly easily, but when you're actually saying, "OK, I'm going to have to put this documentation together, that someone sitting in a room somewhere can look at it and say, 'Yeah, they *do* do it,'" that is the challenge of that. It's not about feeling like you have the processes and stuff, it's really putting it together in a way that it makes sense to who's looking at it, that it's complete.
>
> We had a difficult time with the referral piece. Even though we have it, I think that was our most-structured program and we had really good procedures in place. But we weren't able to really get that through, I guess, with our documentation that we submitted. So it took us about three tries. And we knew we had it. We knew we were doing it; it's just showing the examples. And I think we got to the point where we had to tell kind of like a story with a patient. And then once we kind of learned how to put the documentation together, that's when we tossed it. But that was the most frustrating piece of it because we knew we were doing it but we couldn't get the message across.
>
> A: And we thought we were explaining it from the beginning because it was so structured, but it was up to interpretation whoever was reviewing it, doing the desk audit at the NCQA. They didn't understand the process, so we had to do it three times until we told the story and that's when they—
>
> Q: And they bought it.

Subjectivity and changing interpretation of NCQA standards, submission requirements, and review process. Respondents complained about the subjectivity of the NCQA review process, which created a challenging trial-and-error environment of submitting documentation to reviewers who might or might not interpret documents as intended. Site respondents complained that, although they had received positive feedback on submission materials from TA contacts, sometimes NCQA reviewers disagreed and sites failed to pass certain elements. Adding to the uncertainty was the chance of getting a different reviewer for each submission or resubmission. Having an early reviewer accept a certain component's documentation does not guarantee that a subsequent reviewer will not find fault with it.

> I think that's one of the other biggest challenges; it's not black and white. It's very gray. And so our coach will say, "Your documentation is excellent, it's better than others who have received points," and then we don't receive points. And she's just as frustrated as I am. And I just submitted some information to Qualis, and sometimes they disagree with NCQA. So, it's just really frustrating. You go in thinking you're going to achieve this point value and you don't.
>
> The other thing that's not been helpful, and it's off the subject a little bit, but I really want you to know this, is that documentation that I submitted [for our site] in May of 2013 that was accepted, I then used that same

> documentation in later submissions this past April because, that was accepted, right? Well, it wasn't accepted the second time around. And when I asked my NCQA rep about that she said, "Well, every year it's going to have a different reviewer assigned to it." And that should not be the case. And your recognition depends solely on the documentation, so this should not be subjective.

In particular, respondents from multisite FQHCs reported confusion and challenges around applying for certification for multiple sites. One respondent described how the NCQA process classified their multisite organization differently than other regulatory processes. This was both confusing, as the organization had to navigate the multisite application process, and burdensome, as the organization could not leverage systems and reports that tracked meaningful use for other regulatory processes for the NCQA process. Several respondents complained that the NCQA process for multisite FQHCs was tedious because the same set of documents needed to be created and submitted for each site.

> I think an opportunity to improve the CMS demonstration project going forward is for them to really be clear about the application process when you have more than one site that is applying, because what happened for us is that when we initially submitted our data, some of the reports were system[wide] reports that we used, because we are one system for our meaningful use information. . . . But when it came down to it, you really have to have an individualized report for each one of your practices, even if you were a system organization. And so, a big portion of the application is really having those individualized reports for each one of your practices. . . . That's just something that wasn't really clear to me, even when I had asked the question.

> If you have a large organization, the way the NCQA structure is set up, it makes it very difficult for large organizations to apply, I think. I'm not going to say apply with ease, but apply without it being such a tedious process.

Facilitators and Strategies

Having systems in place to document care practices that would also generate reports and outputs needed for the application. Site leaders believed that a successful application experience was rooted in having a system to document care and being able to extract what was needed from that system. They saw having a foundation of consistent documentation of care among their staff as part of the larger process of attaining Level 3 recognition. In addition, the foundation of a well-functioning EHR was conducive to generating the reports needed for the NCQA application.

> It was a long demonstration project and with the goal being the Level 3 attainment and we had to go back and continue to retrain. We may have started off with rehiring people that vacated the position and retrain, and then certainly make sure that the processes were in place so we could document compliance.

> Our [EHR] training team provided the necessary training for the people who work at the site, so it was a lot easier for us in the company to keep track of the data that we needed for PCMH. Having everyone know where to go/what to do/how to input it made it easier for the quality team to track what was needed for PCMH. . . . Because, like I said, the [EHR] training that they received was extremely official . . . made it easy for me to find the documentation I needed to provide to NCQA.

Having experience in developing policies was important too. Given that PCMH principles emphasize responsiveness and access for patients no matter where they are in the medical system, demonstration FQHCs discovered that having policies and practices in place to track and proactively provide care for all their patients was helpful to their applications. This may be a different model of reporting than many sites were used to.

Connecting with NCQA and other TA to help generate a high-quality application. Sites discussed the importance of making connections and building relationships with staff at NCQA as well as other demonstration-related TA support. In the course of preparing, submitting, and revising their NCQA applications, site leaders described these contacts as acting as an experienced "extra set of eyes" to look over documents and provide high-level feedback on what changes were needed. These contacts served partly in a "hand holding" role, encouraging or providing confirmation for sites that were apprehensive about their materials. Site respondents also said that relationships with key individuals helped them stay on the critical path toward recognition, rather than getting bogged down in their own questions or misdirection.

> [My contact person at Qualis] would look over [our documentation and NCQA application] and then she would direct me, "OK, this is—" whether it be I wasn't reading the element right or I wasn't reading the—and she just—it was education, just phenomenal . . . [She] just told me if I was on the wrong page or if I was looking wrong or better ways to do things. . . . It was a great support, because, like I said, there's sometimes you read some of that stuff and it's like I was not reading it right . . . So, it was just a positive reinforcement for me. It made me feel more secure with what I was doing, because I had no one else. It's like, who else do I go to?

> [It is essential to have] someone, who in this case is also an advocate of [our health center], but who understands the standards and understands what the documentation requirements are for meeting each of those standards.

Backward mapping from NCQA and demonstration deadlines and requirements in order to set internal timelines and motivate change. A third factor that site leaders described as facilitating their NCQA application was a process of backward mapping from the NCQA standards and demonstration deadlines to the practice changes and documentation that they needed to execute. Because the application deadlines and NCQA

criteria were tangible representations of PCMH transformation, sites found that having a structure helped them focus their attention and efforts on PCMH.

> [Applying for NCQA recognition] supports transformation [because] it keeps you moving forward. I think it can be easy to get a little perfunctory and lazy . . . For example, if we didn't have NCQA applications to do, we set up the EMR [electronic medical record] seven years ago and we would have sat back on our laurels and said, "That's the way it is." But we have the standards and even the standards change and the standards become more rigorous. And between NCQA and meaningful use and IPRO [Improving Healthcare for the Common Good] audits, etc., etc., you're constantly having to tweak and retool. And I truly feel that that makes things better all the time.
>
> And I think the demonstration project itself really helped [achieve Level 3 within the time frame of the demonstration]. Having to submit these semiannual surveys really kept us on track and allowed us to understand sort of areas of improvement.

Insight from PCA Leaders

PCA leaders discussed two challenges and two facilitators to demonstration sites preparing and submitting NCQA application.

Challenges

PCA leaders discussed two challenges experienced by FQHCs during the NCQA application process. First, they reported that sites struggled with documenting care practices and generating the documentation they needed for the NCQA application. PCAs noted the paperwork burden that the NCQA submission created and cited it as an obstacle for sites, both with regard to being time-consuming and interfering with provider workflow. The NCQA process of having two online interfaces was confusing to sites, which also had to coordinate the HRSA paperwork in advance of their application to have it paid for.

> It's just the work of getting all these documents together that's really holding up the process.
>
> The challenge is that it's very, very time-consuming, and so, sometimes the providers and staff have just felt like they didn't get to deliver care because they were too busy trying to make sure they had written policies and procedures and all the I's were dotted and T's crossed in order to get the application prepared and submitted. Because you have to have lots of screenshots. So, every time you did something, you had to upload it and make a copy of it. . . . so there's a lot of busy work in terms of documenting it and uploading it and all that.

> For a health center staff brand-new to sort of working with this, it's a little bit confusing because NCQA has a lot of product lines, but the centers don't know about that. [For their application] there's two portals, like two interfaces, basically, that you're working in. So they have their online application. And then they call it the online application for people who would be like, "OK, this is my PCMH application." But it's not. And [then there's] the [Interactive Survey System] ISS survey tool. If you had listened to NCQA's instructions really carefully that was very clear, but it often wouldn't be clear. . . . [In addition,] HRSA will cover all of their [NCQA application] fees but you have to have that paperwork in [to HRSA] ahead of time. So [sites] just needed to have three balls in the air with this. They needed to have both NCQA portals and have gone through the process with HRSA, so there are these three lines of communication.

The second challenge reported by PCA leaders was subjectivity and changing interpretation of NCQA standards, submission requirements, and review process. Respondents reported that it was not uncommon for sites to experience variation in how reviewers scored an application, which put the PCAs in a difficult position of not feeling entirely confident in their recommendations, knowing that the process could be fairly subjective.

> I think one of the issues that I think . . . was getting resolved was the lack of continuity in the consultants that were doing the reviews. And I think a lot of the information was dependent on who you got [as your reviewer], and what passed and what wouldn't pass. I think [NCQA] got better with that.
>
> And to be very frank about something, the other piece of that that we've noticed is just the . . . well, for lack of a better word, the ambiguity that's associated with NCQA in the recognition process. They didn't do a corporate survey. We had wished that they had, but they chose not to. They were implementing their EMR at sites at different times and so they thought it best to do each site absolutely individually. And so they would submit documentation for one site and they would receive Level 2, and they would submit that almost exact same documentation for the next site using the same policy, because it is the same organization, and they would receive a Level 1 or they would get no recognition and have to resubmit things. It seems sometimes like NCQA is very subjective. Their reviewers are very subjective sometimes.

Facilitators and Strategies

PCA leaders described how some sites figured out how to meet NCQA standards despite the in-house processes or practice changes being constrained by forces beyond their control (e.g., specialist access). This relates to the strategy of storytelling described by PCA leaders; in both cases, there was a learning curve during which sites came to understand what NCQA needed to see as evidence that requirements were being met,

after which sites were better able to communicate to NCQA how they were implementing PCMH.

> That specific portion [on coordinating specialty care] is challenging but the coaches we work with are far more well versed in drawing the specifics [of what the application requires] out of their head. But I think health centers either opt out of that and still be successful or there's a way to show that they've got the [tracking] systems in place, even if they're not getting the same responsiveness from the [specialists] they're referring patients to, and still get the points.

A second facilitator of NCQA submission and a positive outcome of the demonstration was a process one PCA worked out with AIR to provide more information about the status of the demonstration sites' applications.

> Now, I'm sad that the demo is ending because . . . now I get weekly or almost weekly updates from AIR that they get from NCQA system, about where all the demo sites are in their application process—so, who has an add-on, who has submitted an add-on. There's like five stages of review that are not publicly transparent at all, so I could see someone is like, "Oh, I'm late in my review." And I could see that, "Well, you've moved from the initial review to the executive review so I know that you're close."

Experience of Comparison Sites

Challenges

When asked about the challenges, if any, faced with NCQA recognition, respondents from comparison FQHCs raised several themes that were largely similar to those raised by demonstration sites. For example, both demonstration and comparison sites sometimes complained that the NCQA PCMH guidelines lacked clarity. The multistep process involved in application submission was also cited as a challenge.

> The application submission was just like, "Gosh, you can't make it a little simpler?" You have to submit an application and then you would hear back, and then you would go to a survey tool and then submit the survey. I mean, it's multiple steps. It wasn't clean and easy. And I did have to call them a bunch of times to ask for clarifications, unfortunately.

Demonstration site respondents raised an additional theme related to NCQA recognition that was not discussed by comparison sites: the challenge of having different reviewers for a resubmitted application. It is possible that comparison sites had not advanced to this stage of NCQA recognition, or that they had less experience with re-review because they waited until they were more prepared to submit an application.

Separate from the application process, and similar to demonstration sites, comparison site respondents also mentioned the challenge of applying PCMH principles to the

FQHC-user population. They discussed how both their populations (e.g., lack of computer and Internet access, higher proportion of non-English speakers) and the operating environments made it difficult to enact some PCMH changes that NCQA required. For example, one respondent described how specialist referral tracking required access to specialists who would take uninsured or Medicaid patients, and who would then be responsive about sending patient information back to the clinic, resources that this particular respondent felt were limited in their geographic area.

Facilitators and Strategies

Similar to demonstration sites, comparison sites mentioned the importance of hiring and/or connecting with individuals who are highly familiar with the recognition process to help meet the NCQA standards. In lieu of formal TA resources, comparison sites described the benefit of engaging individuals who are strongly committed to and knowledgeable about PCMH.

A13. Survey of Clinician and Staff Experiences

This appendix provides additional information about the clinician and staff experience (CASE) survey, which is discussed in Chapter Eight.

What Is the Uptake and Quality of TA and Feedback Reports?

Among demonstration sites, awareness that the site was making efforts to become a medical home was high, and awareness increased statistically significantly, from 82.5 percent to 86.6 percent of respondents, between the baseline and follow-up CASE surveys. However, less than one-third of respondents were aware that their sites were in the Medicare Federally Qualified Health Center (FQHC) Advanced Primary Care Practice (APCP) Demonstration, and this percentage did not increase significantly over time.

Fewer than half of respondents attended webinars or received training on improving access or care coordination, and these percentages did not change significantly between the baseline and follow-up CASE surveys. However, among respondents who did attend such webinars or receive such training, ratings of the clarity and usefulness of the information exceeded 80 percent in both baseline and follow-up CASE fieldings. (Due to small sample size, the statistical significance of changes over time could not be computed.) Note that, since the FQHC APCP Demonstration was not the only possible source of the types of training assessed in the CASE survey, the percentage of CASE respondents indicating that they had received a given type of training can be interpreted as an upper bound on the percentage who attended a demonstration training.

The percentage of respondents who had seen feedback reports on becoming a medical home increased statistically significantly from 36 percent to 55 percent between the baseline and follow-up CASE surveys. However, the percentage of respondents who found the reported information useful decreased significantly, especially among those in sites with higher baseline RAS scores. Because the FQHC APCP Demonstration was not the only possible source of feedback reports on becoming a medical home, the percentage of CASE respondents indicating that they had seen such a report can be interpreted as an upper bound on the percentage who saw a demonstration feedback report.

Approximately one-third of respondents saw feedback reports on measures of health care utilization, costs, and quality, and this percentage did not increase statistically significantly between the baseline and follow-up CASE surveys. Among respondents who did see such reports, more than 90 percent found the information clear and more than three-quarters found the information useful. (Due to small sample size, the statistical

significance of changes over time could not be computed for some variables.) Because the FQHC APCP demonstration was not the only possible source of feedback reports on measures of health care utilization, costs, and quality, the percentage of CASE respondents indicating that they had seen such a report can be interpreted as an upper bound on the percentage that saw a demonstration feedback report.

Fewer than 25 percent of CASE respondents reported having seen a report of Medicare patients at the practice who had been hospitalized or visited an emergency department (ED). Among those who had seen such a list, approximately three in four reported that the lists were accurate. These figures did not change significantly over time.

How Else Do Practices Change?

Changes in Direct Relation to TA Exposure

Among CASE respondents who had received training or attended a webinar on improving care coordination, the observed percentage who reported that these sessions led to changes in the way providers in their practice communicated with each other increased from 73 percent to 83 percent; however, due to small sample size, statistical significance could not be computed. The percentage of respondents who reported changes in the way providers communicated with specialists, hospitals, or EDs had a statistically significant increase from 70 percent to 81 percent between the baseline and follow-up CASE surveys.

Changes in Direct Relation to Exposure to Feedback Reports

Among CASE respondents who had seen a feedback report on becoming a medical home, more than 90 percent reported that there had been resulting changes to their work and the work of others in the baseline CASE fielding, but only 81 percent reported similar answers in the follow-up fielding (a statistically significant decrease for changes to the work performed by others).

Among CASE respondents who had seen a feedback report on measures of health care utilization, costs, and quality, approximately 70–75 percent reported resulting changes to the work performed by themselves or others. These percentages did not change significantly between the baseline and follow-up CASE surveys.

Among CASE respondents who had seen a report of Medicare patients at their practice or which specific Medicare patients had been hospitalized or visited an ED, more than 80 percent reported that the practice used these lists to contact patients after hospitalizations, more than 70 percent reported their use to contact patients after ED visits, and approximately 60 percent reported their use to make change to care for all

patients. These percentages did not change significantly between the baseline and follow-up CASE surveys (when statistical significance could be computed).

What Are the Challenges to Practice Change?

Specialty Access

Access to specialty services did not increase in a statistically significant manner among demonstration sites, according to CASE respondents. Approximately 21 percent of clinicians reported that it was easy to obtain timely new-patient office visits with specialists outside their sites at baseline, and, while this percentage increased to 29 percent in the unadjusted data, there was no statistically significant increase after adjustment for confounders. A similar pattern of limited access was reported for specialist follow-up visits, for specialist procedures, and for mental health provider visits.

How Do the Interventions Help Sites Overcome Challenges?

Lack of access to specialists and mental health services may challenge FQHC sites' transformation into APCPs. However, there were no statistically significant changes in the percentage of CASE respondents reporting that their sites were making efforts to increase the amount of care that patients receive from specialists and the availability of mental health services.

Do FQHCs Participating in the Demonstration Provide Better or Enhanced Access to Medicare Beneficiaries' PCMH Providers?

The percentage of CASE respondents reporting that their sites were making efforts to increase the availability of transportation to and from sites increased from approximately 30 percent to 34 percent, but this increase was not statistically significant and had no association with baseline RAS score.

Access to Information and Services (Baseline CASE survey)

The percentage of CASE respondents reporting that their sites were making efforts to increase the number of office visits with patients or the amount of patient care via telephone did not change between the baseline and follow-up CASE surveys. However, the percentage reporting that their sites were making efforts to increase the amount of patient care via email increased from 26 percent at baseline to nearly 35 percent at follow-up ($p=0.0002$). Because the CASE survey was not fielded outside the demonstration sites, it is impossible to know whether this increase in efforts to deliver

care via email was driven by the demonstration itself or by other interventions (e.g., Meaningful Use incentives).

Adherence to Evidence-Based Guidelines

The CASE survey provides data pertinent to one of our evidence-based domain measures, the provision of nutrition and weight loss services. Providing such services is concordant with guidelines for several patient groups salient to the demonstration (e.g., those with obesity, diabetes, and osteoarthritis of weight-bearing joints). There was no change over time in the percentage of CASE respondents who reported that their sites were making efforts to increase the availability of nutrition or weight loss services.

Coordination of Care

Care coordination includes information flow to FQHC sites from providers who share patients with such sites and proactive continuity of care with hospitalized patients. Baseline CASE survey analyses showed that approximately 47 percent of respondents reported that hospitals usually or often notified their sites of patient admissions, and this percentage did not increase by the time of the follow-up survey. Similarly, there were no statistically significant changes over time in rates of demonstration site clinicians visiting their hospitalized patients (26 percent at baseline), respondents reporting that EDs notified their sites of visits (39 percent), or receiving discharge summaries from hospitals and EDs (63 percent). There was also no significant change in the percentage of respondents reporting that their sites were making efforts to increase the number of patients seeing a provider in the clinic within two weeks after a hospitalization.

Reduction/Elimination of Disparities

Health disparities may be affected by the availability of interpreter services. There was no statistically significant change in the percentage of CASE respondents reporting that it was easy to obtain interpreter services for non–English-speaking patients between the baseline and follow-up CASE surveys. There also was no statistically significant change in the percentage of respondents reporting that their sites were making efforts to increase the availability of interpreter services.

What Is the Quality of the TA?

In demonstration sites, awareness that the site was making efforts to become a medical home was high, and awareness increased statistically significantly, from 82.5 percent to 86.6 percent of respondents, between the baseline and follow-up CASE surveys (see Exhibit A13.1). However, less than one-third of respondents were aware that

their sites were in the Medicare FQHC APCP Demonstration, and this percentage did not increase significantly over time.

Exhibit A13.1. Awareness of Participation

	Number of Survey Respondents	Number of Sites with One or More Respondents	Early Survey (%)	Late Survey (%)	Adjusted Odds Ratio, Late Minus Early	P-value, Late Minus Early
Survey item: To your knowledge, is your practice participating in any projects to become a "medical home" or "advanced primary care practice"? [Percent responding "Yes"]						
All sites	540	288	82.5	86.6	1.363 (1.027 to 1.810)	0.0319
High RAS*	282	147	82.3	87.3	1.498 (1.024 to 2.192)	0.0374
Low RAS	258	141	82.8	85.8	1.236 (0.813 to 1.879)	0.3212
Difference, high minus low RAS	NA**	NA	–0.6	1.5	1.212 (0.689 to 2.132)	0.5051
Survey item: Are any of these projects run by Medicare or called the Advanced Primary Care Practice Demonstration? [Percent responding "Yes"]						
All sites	533	288	26.9	28.9	1.095 (0.866 to 1.385)	0.4498
High RAS*	278	145	25.3	29.2	1.199 (0.871 to 1.650)	0.2664
Low RAS	255	143	28.7	28.5	0.997 (0.706 to 1.408)	0.9863
Difference, high minus low RAS	NA	NA	–3.4	0.7	1.202 (0.750 to 1.926)	0.4435

NOTES: Percentages weighted for survey nonresponse. Adjusted odds ratios are from nonresponse-weighted logistic models that account for survey version (clinician or other staff); site characteristics (presence of an EHR at baseline, presence of any medical home certification at baseline, presence of after-hours care at baseline, number of sites, participation in any HRSA medical home program, total revenue per site); patient characteristics (mean HCC, percent disabled, percent female); and local area characteristics (percent household poverty in Census tract containing the site). Confidence intervals and p-values are from these weighted, adjusted models, with robust standard errors to account for site-level nonindependence of observations.
* "High RAS" defined as NCQA Level 2 or 3 equivalent on baseline RAS. "Low RAS" defined as NCQA Level 1 or lower on baseline RAS.
** NA denotes "not applicable" when adjusted regression models failed to converge due to small sample sizes, resulting in noncomputation of adjusted odds ratios and p-values.

The FQHC APCP Demonstration was not the only possible source of the types of training assessed in the CASE survey, so the percentage of CASE respondents indicating that they had received a given type of training can be interpreted as an upper bound on the percentage who attended a demonstration training. Fewer than half of respondents attended webinars or received training on improving access or care coordination, and these percentages did not change significantly between the baseline and follow-up CASE

surveys. However, among respondents who did attend such webinars or receive such training, ratings of the clarity and usefulness of the information presented exceeded 80 percent in both baseline and follow-up CASE fieldings. (Due to small sample size, the statistical significance of changes over time could not be computed; see Exhibit A13.2.)

Exhibit A13.2. Participation in Training

	Number of Survey Respondents	Number of Sites with One or More Respondents	Early Survey (%)	Late Survey (%)	Adjusted Odds Ratio, Late Minus Early	P-value, Late Minus Early
Survey item: In the past year, have you attended any webinars or training sessions about improving your patients' access to care? [Percent responding "Yes"]						
All sites	233	176	44.1	39.9	0.849 (0.604 to 1.193)	0.3452
High RAS*	132	95	46.5	45.1	0.941 (0.593 to 1.494)	0.7971
Low RAS	101	81	40.6	33.0	0.727 (0.439 to 1.203)	0.2149
Difference, high minus low RAS	NA**	NA	5.9	12.2	1.294 (0.653 to 2.565)	0.4596
Survey item: In these training sessions about improving access, how clear was the presentation of information? [Percent responding "Extremely" or "Somewhat"]						
All sites	150	124	93.6	94.3	NA	NA
High RAS*	93	74	95.3	96.8	NA	NA
Low RAS	57	50	91.1	90.2	NA	NA
Difference, high minus low RAS	NA	NA	4.2	6.6	NA	NA
Survey item: In the past year, have you attended any webinars or training sessions about improving care coordination for your patients? [Percent responding "Yes"]						
All sites	233	176	40.8	35.9	0.819 (0.601 to 1.115)	0.2044
High RAS*	132	95	44.1	34.3	0.655 (0.427 to 1.006)	0.0533
Low RAS	101	81	36.4	38.1	1.097 (0.716 to 1.680)	0.6720
Difference, high minus low RAS	NA	NA	7.7	–3.8	0.597 (0.326 to 1.096)	0.0962
Survey item: In these training sessions about improving care coordination how clear was the presentation of information? [Percent responding "Extremely" or "Somewhat"]						
All sites	131	102	95.1	94.3	NA	NA
High RAS*	76	58	98.5	95.8	NA	NA

	Number of Survey Respondents	Number of Sites with One or More Respondents	Early Survey (%)	Late Survey (%)	Adjusted Odds Ratio, Late Minus Early	P-value, Late Minus Early
Low RAS	55	44	90.1	92.4	NA	NA
Difference, high minus low RAS	NA	NA	8.5	3.4	NA	NA
Survey item: In these training sessions about improving care coordination how useful was the information? [Percent responding "Extremely" or "Somewhat"]						
All sites	131	102	91.7	84.3	NA	NA
High RAS*	76	58	93.1	89	NA	NA
Low RAS	55	44	89.7	78.7	NA	NA
Difference, high minus low RAS	NA	NA	3.3	10.2	NA	NA

NOTES: Percentages weighted for survey nonresponse. Adjusted odds ratios are from nonresponse-weighted logistic models that account for survey version (clinician or other staff); site characteristics (presence of an EHR at baseline, presence of any medical home certification at baseline, presence of after-hours care at baseline, number of sites, participation in any HRSA medical home program, total revenue per site); patient characteristics (mean HCC, percent disabled, percent female); and local area characteristics (percent household poverty in Census tract containing the site). Confidence intervals and p-values are from these weighted, adjusted models, with robust standard errors to account for site-level nonindependence of observations.
* "High RAS" defined as NCQA-level 2 or 3 equivalent on baseline RAS. "Low RAS" defined as NCQA-level 1 or lower on baseline RAS.
** NA denotes "not applicable" when adjusted regression models failed to converge due to small sample sizes, resulting in noncomputation of adjusted odds ratios and p-values.

The FQHC APCP Demonstration was not the only possible source of feedback reports on becoming a medical home, so the percentage of CASE respondents indicating that they had seen such a report can be interpreted as an upper bound on the percentage who saw a demonstration feedback report (see Exhibit A13.3). The percentage of respondents who had seen such reports increased statistically significantly from 36 percent to 55 percent between the baseline and follow-up CASE surveys. However, the percentage of respondents who found the reported information useful decreased significantly, especially among those in sites with higher baseline RAS scores.

Exhibit A13.3. Medical Home Recognition or Scores

	Number of Survey Respondents	Number of Sites with One or More Respondents	Early Survey (%)	Late Survey (%)	Adjusted Odds Ratio, Late Minus Early	P-value, Late Minus Early
Survey item: Have you seen any feedback reports that give your practice recognition or a score for being a medical home? [Percent responding "Yes"]						
All sites	233	176	35.9	55.2	2.310 (1.607 to 3.320)	<0.0001

	Number of Survey Respondents	Number of Sites with One or More Respondents	Early Survey (%)	Late Survey (%)	Adjusted Odds Ratio, Late Minus Early	P-value, Late Minus Early
High RAS*	132	95	37.1	55.4	2.226 (1.420 to 3.490)	0.0005
Low RAS	101	81	34.3	55.1	2.427 (1.340 to 4.398)	0.0034
Difference, high minus low RAS	NA**	NA	2.7	0.3	0.917 (0.436 to 1.930)	0.8196
Survey item: In these reports [that give your practice recognition or a score for being a medical home], how clear was the presentation of information? [Percent responding "Extremely" or "Somewhat"]						
All sites	155	122	92.4	88.3	0.604 (0.237 to 1.538)	0.2904
High RAS*	88	67	94.5	87.1	0.408 (0.121 to 1.370)	0.1467
Low RAS	67	55	89.4	90.0	0.958 (0.219 to 4.196)	0.9549
Difference, high minus low RAS	NA	NA	5.0	–2.9	0.425 (0.063 to 2.892)	0.3822
Survey item: In these reports [that give your practice recognition or a score for being a medical home], how useful was the information? [Percent responding "Extremely" or "Somewhat"]						
All sites	152	120	83.3	70	0.455 (0.235 to 0.881)	0.0195
High RAS*	86	66	87.0	63.6	0.253 (0.112 to 0.574)	0.0010
Low RAS	66	54	77.7	78.4	1.009 (0.351 to 2.902)	0.9871
Difference, high minus low RAS	NA	NA	9.30	–14.8	0.251 (0.067 to 0.945)	0.0410

NOTES: Percentages weighted for survey nonresponse. Adjusted odds ratios are from nonresponse-weighted logistic models that account for survey version (clinician or other staff); site characteristics (presence of an EHR at baseline, presence of any medical home certification at baseline, presence of after-hours care at baseline, number of sites, participation in any HRSA medical home program, total revenue per site); patient characteristics (mean HCC, percent disabled, percent female); and local area characteristics (percent household poverty in Census tract containing the site). Confidence intervals and p-values are from these weighted, adjusted models, with robust standard errors to account for site-level nonindependence of observations.

* "High RAS" defined as NCQA-level 2 or 3 equivalent on baseline RAS. "Low RAS" defined as NCQA-level 1 or lower on baseline RAS.

** NA denotes "not applicable" when adjusted regression models failed to converge due to small sample sizes, resulting in noncomputation of adjusted odds ratios and p-values.

The FQHC APCP Demonstration was not the only possible source of feedback reports on measures of health care utilization, costs, and quality, so the percentage of CASE respondents indicating that they had seen such a report can be interpreted as an upper bound on the percentage that saw a demonstration feedback report. Approximately one-third of respondents saw such reports on measures of health care utilization, costs,

and quality, and this percentage did not increase statistically significantly between the baseline and follow-up CASE surveys. Among respondents who did see such reports, more than 90 percent found the information clear and more than three-quarters found the information useful. (Due to small sample size, the statistical significance of changes over time could not be computed for some variables. See Exhibit A13.4.)

Exhibit A13.4. Awareness of Feedback Reports

	Number of Survey Respondents	Number of Sites with One or More Respondents	Early Survey (%)	Late Survey (%)	Adjusted Odds Ratio, Late Minus Early	P-value, Late Minus Early
Survey item: Have you seen any feedback reports that compare your practice to other practices on measures of health care utilization, costs, and quality? [Percent responding "Yes"]						
All sites	233	176	31.0	35.2	1.208 (0.856 to 1.705)	0.2822
High RAS*	132	95	34.7	35.6	1.051 (0.661 to 1.672)	0.8323
Low RAS	101	81	26.3	34.6	1.463 (0.878 to 2.438)	0.1443
Difference, high minus low RAS	NA**	NA	8.3	1.0	0.719 (0.361 to 1.432)	0.3476
Survey item: In these reports [that compare your practice to other practices on measures of health care utilization, costs, and quality, how clear was the presentation of information? [Percent responding "Extremely" or "Somewhat"]						
All sites	118	94	92.2	92.8	1.132 (0.350 to 3.659)	0.8360
High RAS*	71	55	96.4	95.5	0.953 (0.106 to 8.543)	0.9658
Low RAS	47	39	84.9	89.2	1.173 (0.297 to 4.625)	0.8201
Difference, high minus low RAS	NA	NA	11.5	6.3	0.813 (0.064 to 10.332)	0.8731
Survey item: In these reports [that compare your practice to other practices on measures of health care utilization, costs, and quality, how useful was the information? [Percent responding "Extremely" or "Somewhat"]						
All sites	115	91	82.1	74.0	NA	NA
High RAS*	70	54	87.6	76.7	NA	NA
Low RAS	45	37	72.2	70.4	NA	NA
Difference, high minus low RAS	NA	NA	15.3	6.3	NA	NA

NOTES: Percentages weighted for survey nonresponse. Adjusted odds ratios are from nonresponse-weighted logistic models that account for survey version (clinician or other staff); site characteristics (presence of an EHR at baseline, presence of any medical home certification at baseline, presence of after-hours care at baseline, number of sites, participation in any HRSA medical home program, total revenue per site); patient characteristics (mean HCC, percent disabled, percent female); and local area characteristics (percent household poverty in Census tract containing the site). Confidence intervals and p-values are from these weighted, adjusted models, with robust standard errors to account for

	Number of Survey Respondents	Number of Sites with One or More Respondents	Early Survey (%)	Late Survey (%)	Adjusted Odds Ratio, Late Minus Early	P-value, Late Minus Early

site-level nonindependence of observations.
* "High RAS" defined as NCQA-level 2 or 3 equivalent on baseline RAS. "Low RAS" defined as NCQA-level 1 or lower on baseline RAS.
** NA denotes "not applicable" when adjusted regression models failed to converge due to small sample sizes, resulting in noncomputation of adjusted odds ratios and p-values.

Fewer than 25 percent of CASE respondents reported having seen a report of Medicare patients at the practice who had been hospitalized or visited an emergency department (ED). Among those who had seen such a list, approximately three in four reported that the lists were accurate. These figures did not change significantly over time (see Exhibit A13.5).

Exhibit A13.5. Familiarity with Medicare Patient Lists

	Number of Survey Respondents	Number of Sites with One or More Respondents	Early Survey (%)	Late Survey (%)	Adjusted Odds Ratio, Late Minus Early	P-value, Late Minus Early
Survey item: Have you seen any reports that give you a list of Medicare patients at your practice or tell you which specific Medicare patients have been hospitalized or visited an emergency department? [Percent responding "Yes"]						
All sites	234	177	19.8	25.5	1.403 (0.976 to 2.015)	0.0672
High RAS*	133	96	19.5	26.9	1.533 (1.008 to 2.331)	0.0457
Low RAS	101	81	20.0	23.7	1.247 (0.661 to 2.353)	0.4957
Difference, high minus low RAS	NA**	NA	–0.5	3.2	1.230 (0.575 to 2.632)	0.5945
Survey item: In these reports [that give you a list of Medicare patients at your practice or tell you which specific Medicare patients have been hospitalized or visited an emergency department], how accurate were the lists of your patients? [Percent responding "Extremely" or "Somewhat"]						
All sites	89	75	75.8	73.1	0.791 (0.322 to 1.943)	0.6086
High RAS*	52	43	75.3	80.2	1.244 (0.358 to 4.327)	0.7311
Low RAS	37	32	76.5	61.8	0.424 (0.112 to 1.607)	0.2068
Difference, high minus low RAS	NA	NA	–1.2	18.4	2.935 (0.475 to 18.140)	0.2465
Survey item: In these reports [that give you a list of Medicare patients at your practice or tell you which specific Medicare patients have been hospitalized or visited an emergency department], how accurate was the listing of your patients who visited the hospital or emergency department? [Percent responding "Extremely" or "Somewhat"]						

	Number of Survey Respondents	Number of Sites with One or More Respondents	Early Survey (%)	Late Survey (%)	Adjusted Odds Ratio, Late Minus Early	P-value, Late Minus Early
All sites	89	74	79.0	77.4	0.858 (0.324 to 2.269)	0.7576
High RAS*	53	43	74.8	82.9	1.512 (0.436 to 5.239)	0.5144
Low RAS	36	31	85.5	68.4	0.345 (0.064 to 1.858)	0.2155
Difference, high minus low RAS	NA	NA	–10.7	14.6	4.378 (0.556 to 34.493)	0.1609

NOTES: Percentages weighted for survey nonresponse. Adjusted odds ratios are from nonresponse-weighted logistic models that account for survey version (clinician or other staff); site characteristics (presence of an EHR at baseline, presence of any medical home certification at baseline, presence of after-hours care at baseline, number of sites, participation in any HRSA medical home program, total revenue per site); patient characteristics (mean HCC, percent disabled, percent female); and local area characteristics (percent household poverty in Census tract containing the site). Confidence intervals and p-values are from these weighted, adjusted models, with robust standard errors to account for site-level nonindependence of observations.
* "High RAS" defined as NCQA-level 2 or 3 equivalent on baseline RAS. "Low RAS" defined as NCQA-level 1 or lower on baseline RAS.
** NA denotes "not applicable" when adjusted regression models failed to converge due to small sample sizes, resulting in noncomputation of adjusted odds ratios and p-values.

How Else Do Practices Change?

Changes in Direct Relation to TA Exposure

Among CASE respondents who had received training or attended a webinar on improving care coordination, the observed percentage who reported that these sessions led to changes in the way providers in their practice communicated with each other increased from 73 percent to 83 percent, but due to small sample size, statistical significance could not be computed (see Exhibit A13.6). The percentage of respondents who reported changes in the way providers communicate with specialists, hospitals, or EDs had a statistically significant increase from 70 percent to 81 percent between the baseline and follow-up CASE surveys.

Exhibit A13.6. Improving Care Coordination

	Number of Survey Respondents	Number of Sites with One or More Respondents	Early Survey (%)	Late Survey (%)	Adjusted Odds Ratio, Late Minus Early	P-value, Late Minus Early
Survey item: Have these training sessions changed the way providers in the practice communicate with each other? [Percent responding "Yes," "Major," or "Minor"]						
All sites	129	101	73.4	82.9	1.807 (0.927 to 3.525)	0.0824
High RAS*	76	58	71.9	87.0	2.844	0.0343

	Number of Survey Respondents	Number of Sites with One or More Respondents	Early Survey (%)	Late Survey (%)	Adjusted Odds Ratio, Late Minus Early	P-value, Late Minus Early
					(1.080 to 7.487)	
Low RAS	53	43	75.7	77.9	1.084 (0.420 to 2.798)	0.8671
Difference, high minus low RAS	NA**	NA	–3.8	9.0	2.623 (0.663 to 10.382)	0.1695
Survey item: Have these training sessions changed the way providers in the practice communicate with specialists, hospitals, or emergency departments? [Percent responding "Yes," "Major," or "Minor"]						
All sites	131	103	70.2	81.3	1.933 (1.039 to 3.596)	0.0376
High RAS	77	59	69.5	81.9	1.949 (0.818 to 4.644)	0.1318
Low RAS	54	44	71.3	80.5	1.892 (0.749 to 4.777)	0.1774
Difference, high minus low RAS	NA	NA	–1.8	1.4	1.030 (0.284 to 3.745)	0.9637

NOTES: Percentages weighted for survey nonresponse. Adjusted odds ratios are from nonresponse-weighted logistic models that account for survey version (clinician or other staff); site characteristics (presence of an EHR at baseline, presence of any medical home certification at baseline, presence of after-hours care at baseline, number of sites, participation in any HRSA medical home program, total revenue per site); patient characteristics (mean HCC, percent disabled, percent female); and local area characteristics (percent household poverty in Census tract containing the site). Confidence intervals and p-values are from these weighted, adjusted models, with robust standard errors to account for site-level nonindependence of observations.

* "High RAS" defined as NCQA-level 2 or 3 equivalent on baseline RAS. "Low RAS" defined as NCQA-level 1 or lower on baseline RAS.

** NA denotes "not applicable" when adjusted regression models failed to converge due to small sample sizes, resulting in noncomputation of adjusted odds ratios and p-values.

Among CASE respondents who had seen a feedback report on becoming a medical home (Exhibit A13.7), more than 90 percent reported that there had been resulting changes to their work and the work of others in the baseline CASE fielding, but only 81 percent reported similar answers in the follow-up fielding (a statistically significant decrease for changes to the work performed by others).

Exhibit A13.7. Response to Medical Home Feedback Reports

	Number of Survey Respondents	Number of Sites with One or More Respondents	Early Survey (%)	Late Survey (%)	Adjusted Odds Ratio, Late Minus Early	P-value, Late Minus Early
Survey item: In response to these reports, have there been any changes to the work you perform? [Percent responding "Yes," "Major," or "Minor"]						
All sites	155	122	90.0	81.2	NA**	NA

	Number of Survey Respondents	Number of Sites with One or More Respondents	Early Survey (%)	Late Survey (%)	Adjusted Odds Ratio, Late Minus Early	P-value, Late Minus Early
High RAS*	88	67	88.1	77.4	NA	NA
Low RAS	67	55	92.5	86.6	NA	NA
Difference, high minus low RAS	NA	NA	–4.4	–9.2	NA	NA
Survey item: In response to these reports, have there been any changes to the work performed by others in the practice? [Percent responding "Yes," "Major," or "Minor"]						
All sites	153	120	94.6	81.1	0.206 (0.066 to 0.643)	0.0065
High RAS*	86	65	94.2	74.0	0.145 (0.041 to 0.516)	0.0028
Low RAS	67	55	95.1	90.7	0.441 (0.049 to 3.956)	0.4649
Difference, high minus low RAS	NA	NA	–0.8	–16.6	0.329 (0.026 to 4.153)	0.3905

NOTES: Percentages weighted for survey nonresponse. Adjusted odds ratios are from nonresponse-weighted logistic models that account for survey version (clinician or other staff); site characteristics (presence of an EHR at baseline, presence of any medical home certification at baseline, presence of after-hours care at baseline, number of sites, participation in any HRSA medical home program, total revenue per site); patient characteristics (mean HCC, percent disabled, percent female); and local area characteristics (percent household poverty in Census tract containing the site). Confidence intervals and p-values are from these weighted, adjusted models, with robust standard errors to account for site-level nonindependence of observations.
* "High RAS" defined as NCQA-level 2 or 3 equivalent on baseline RAS. "Low RAS" defined as NCQA-level 1 or lower on baseline RAS.
** NA denotes "not applicable" when adjusted regression models failed to converge due to small sample sizes, resulting in noncomputation of adjusted odds ratios and p-values.

Among CASE respondents who had seen a feedback report on measures of health care utilization, costs, and quality, approximately 70–75 percent reported resulting changes to the work performed by themselves or others (Exhibit A13.8). These percentages did not change significantly between the baseline and follow-up CASE surveys.

Exhibit A13.8. Response to Utilization Feedback Reports

	Number of Survey Respondents	Number of Sites with One or More Respondents	Early Survey (%)	Late Survey (%)	Adjusted Odds Ratio, Late Minus Early	P-value, Late Minus Early
Survey item: In response to these reports, have there been any changes to the work you perform? [Percent responding "Yes," "Major," or "Minor"]						
All sites	118	93	71.2	75.9	NA**	NA
High RAS*	72	55	65.0	75.2	NA	NA

	Number of Survey Respondents	Number of Sites with One or More Respondents	Early Survey (%)	Late Survey (%)	Adjusted Odds Ratio, Late Minus Early	P-value, Late Minus Early
Low RAS	46	38	81.7	77.0	NA	NA
Difference, high minus low RAS	NA	NA	–16.7	–1.9	NA	NA
Survey item: In response to these reports, have there been any changes to the work performed by others in the practice? [Percent responding "Yes," "Major," or "Minor"]						
All sites	117	92	69.5	73.0	1.196 (0.584 to 2.449)	0.6253
High RAS*	71	54	65.0	70.2	1.333 (0.521 to 3.408)	0.5483
Low RAS	46	38	77.5	76.7	0.957 (0.332 to 2.755)	0.9352
Difference, high minus low RAS	NA	NA	–12.4	–6.5	1.393 (0.343 to 5.655)	0.6430

NOTES: Percentages weighted for survey nonresponse. Adjusted odds ratios are from nonresponse-weighted logistic models that account for survey version (clinician or other staff); site characteristics (presence of an EHR at baseline, presence of any medical home certification at baseline, presence of after-hours care at baseline, number of sites, participation in any HRSA medical home program, total revenue per site); patient characteristics (mean HCC, percent disabled, percent female); and local area characteristics (percent household poverty in Census tract containing the site). Confidence intervals and p-values are from these weighted, adjusted models, with robust standard errors to account for site-level nonindependence of observations.

* "High RAS" defined as NCQA-level 2 or 3 equivalent on baseline RAS. "Low RAS" defined as NCQA-level 1 or lower on baseline RAS.

** NA denotes "not applicable" when adjusted regression models failed to converge due to small sample sizes, resulting in noncomputation of adjusted odds ratios and p-values.

Among CASE respondents who had seen a report of Medicare patients at their practice or which specific Medicare patients had been hospitalized or visited an ED (see Exhibit A13.9), more than 80 percent reported that the practice used these lists to contact patients after hospitalizations, more than 70 percent reported their use to contact patients after ED visits, and approximately 60 percent reported that the practice had used them to make change to care for all patients. These percentages did not change significantly between the baseline and follow-up CASE surveys (when statistical significance could be computed).

Exhibit A13.9. Use of Medicare Lists to Contact Patients

	Number of Survey Respondents	Number of Sites with One or More Respondents	Early Survey (%)	Late Survey (%)	Adjusted Odds Ratio, Late Minus Early	P-value, Late Minus Early
Survey item: To your knowledge, has your practice used these reports to contact patients after a hospitalization? [Percent responding "Yes"]						
All sites	89	74	83.3	84.5	1.329 (0.481 to 3.673)	0.5835
High RAS*	52	42	81.4	86.3	1.526 (0.370 to 6.292)	0.5590
Low RAS	37	32	86.2	81.6	1.021 (0.266 to 3.919)	0.9763
Difference, high minus low RAS	NA**	NA	–4.8	4.8	1.495 (0.214 to 10.446)	0.6853
Survey item: To your knowledge, has your practice used these reports to contact patients after an emergency department visit? [Percent responding "Yes"]						
All sites	89	74	72.3	81.3	NA	NA
High RAS*	52	42	71.5	83.9	NA	NA
Low RAS	37	32	73.5	77.5	NA	NA
Difference, high minus low RAS	NA	NA	–2.0	6.4	NA	NA
Survey item: To your knowledge, has your practice used these reports to make any changes to the way all patients in the practice receive care? [Percent responding "Yes"]						
All sites	90	75	62.1	56.5	0.732 (0.342 to 1.565)	0.4204
High RAS*	53	43	59.2	51.9	0.676 (0.287 to 1.589)	0.3686
Low RAS	37	32	66.4	63.7	0.834 (0.202 to 3.448)	0.8025
Difference, high minus low RAS	NA	NA	–7.2	–11.8	0.810 (0.157 to 4.170)	0.8006

NOTES: Percentages weighted for survey nonresponse. Adjusted odds ratios are from nonresponse-weighted logistic models that account for survey version (clinician or other staff); site characteristics (presence of an EHR at baseline, presence of any medical home certification at baseline, presence of after-hours care at baseline, number of sites, participation in any HRSA medical home program, total revenue per site); patient characteristics (mean HCC, percent disabled, percent female); and local area characteristics (percent household poverty in Census tract containing the site). Confidence intervals and p-values are from these weighted, adjusted models, with robust standard errors to account for site-level nonindependence of observations.

* "High RAS" defined as NCQA-level 2 or 3 equivalent on baseline RAS. "Low RAS" defined as NCQA-level 1 or lower on baseline RAS.

** NA denotes "not applicable" when adjusted regression models failed to converge due to small sample sizes, resulting in noncomputation of adjusted odds ratios and p-values.

Changes in Clinic Culture

Between the baseline and follow-up fieldings of the CASE survey, clinicians and staff in demonstration sites reported statistically significant declines on their scores on the following scales measuring clinic culture: adaptive reserve (and its constituent subscales: relationship infrastructure, facilitative leadership, sensemaking, teamwork, culture of learning, and work environment) from the TransforMed Clinician and Staff Questionnaire (Jaen, Crabtree, et al., 2010); communication openness and organizational learning from the AHRQ Medical Office Survey on Patient Safety Culture (AHRQ, undated-a); and team structure, situation monitoring, and mutual support from the AHRQ TeamSTEPPS Teamwork Perceptions Questionnaire (AHRQ, undated-b). The units of these scale scores lack inherent meaning in terms of their magnitudes, but all are scored so that a higher score reflects a "better" clinic culture (see Exhibit A13.10). Because the CASE survey was only fielded among demonstration participants and not among comparison groups not participating in the demonstration, it is impossible to tell whether these declines reflect possible effects of demonstration participation or more-general "secular trends" among FQHCs over the same time period.

We also investigated whether the degree of change in these measures of clinic culture differed between sites with higher baseline RAS scores (equivalent to NCQA Physician Practice Connections—Patient-Centered Medical Home Levels 2 or 3) and lower baseline RAS scores (equivalent to Level 1 or lower). For nearly all investigated scales measuring clinic culture, respondents in sites with higher baseline RAS scores reported greater score decreases than those in sites with lower baseline RAS scores.

The scale "Values Alignment with Leaders" from the Minimizing Errors/Maximizing Outcomes (MEMO) provider survey was the only exception to this pattern (Linzer, Manwell, et al., 2009). Though there was an observed decline in score, this decline did not achieve statistical significance.

Of note, these scales measuring clinic culture were highly correlated with each other, with nearly all pairwise correlation coefficients exceeding 0.4. All such pairwise correlations between clinic culture scales were statistically significant at $p<0.0001$.

Exhibit A13.10. Changes in Clinic Culture

	Number of Survey Respondents	Number of Sites with One or More Respondents	Early Survey (%)	Late Survey (%)	Adjusted Odds Ratio, Late Minus Early	P-value, Late Minus Early
Survey scale: Adaptive Reserve [continuous score; higher score=greater adaptive reserve]						
All sites	564	296	65.066	61.077	–3.966 (–5.371 to –2.560)	<0.0001
High RAS*	296	152	66.163	59.828	–6.299 (–8.277 to –4.322)	<0.0001
Low RAS	268	144	63.861	62.439	–1.414 (–3.281 to 0.453)	0.1378
Difference, high minus low RAS	NA**	NA	2.303	–2.611	–4.885 (–7.604 to –2.166)	0.0004
Survey scale: Relationship Infrastructure [continuous score; higher score=better]						
All sites	564	296	65.253	62.221	–3.044 (–4.509 to –1.579)	<0.0001
High RAS*	296	152	66.442	61.271	–5.171 (–7.199 to –3.143)	<0.0001
Low RAS	268	144	63.946	63.264	–0.708 (–2.742 to 1.325)	0.4948
Difference, high minus low RAS	NA	NA	2.496	–1.993	–4.463 (–7.334 to –1.591)	0.0023
Survey scale: Facilitative Leadership [continuous score; higher score=better]						
All sites	564	296	63.447	58.07	–5.386 (–7.365 to –3.407)	<0.0001
High RAS*	296	152	64.635	55.888	–8.755 (–11.512 to –5.998)	<0.0001
Low RAS	268	144	62.141	60.467	–1.685 (–4.336 to 0.965)	0.2126
Difference, high minus low RAS	NA	NA	2.494	–4.579	–7.070 (–10.892 to –3.248)	0.0003
Survey scale: Sensemaking [continuous score; higher score=better]						
All sites	564	296	68.11	64.114	–3.991 (–5.885 to –2.098)	<0.0001
High RAS*	296	152	68.789	62.943	–5.816 (–8.413 to –3.219)	<0.0001
Low RAS	268	144	67.364	65.4	–1.988 (–4.661 to 0.685)	0.145
Difference, high minus low RAS	NA	NA	1.425	–2.457	–3.828 (–7.548 to –0.108)	0.0437
Survey scale: Teamwork [continuous score; higher score=better]						
All sites	564	296	64.349	58.953	–5.387 (–7.049 to –3.726)	<0.0001

	Number of Survey Respondents	Number of Sites with One or More Respondents	Early Survey (%)	Late Survey (%)	Adjusted Odds Ratio, Late Minus Early	P-value, Late Minus Early
High RAS*	296	152	65.639	58.581	–7.041 (–9.451 to –4.630)	<0.0001
Low RAS	268	144	62.933	59.358	–3.577 (–5.777 to –1.377)	0.0014
Difference, high minus low RAS	NA	NA	2.706	–0.777	–3.464 (–6.727 to –0.201)	0.0375
Survey scale: Culture of Learning [continuous score; higher score=better]						
All sites	564	296	58.36	55.307	–3.019 (–4.506 to –1.531)	<0.0001
High RAS*	296	152	58.777	54.112	–4.628 (–6.663 to –2.592)	<0.0001
Low RAS	268	144	57.901	56.61	–1.258 (–3.368 to 0.852)	0.2425
Difference, high minus low RAS	NA	NA	0.876	–2.498	–3.370 (–6.305 to –0.434)	0.0245
Survey scale: Work Environment [continuous score; higher score=better]						
All sites	564	296	61.272	57.299	–3.939 (–5.711 to –2.167)	<0.0001
High RAS*	296	152	61.824	56.242	–5.555 (–8.043 to –3.066)	<0.0001
Low RAS	268	144	60.662	58.455	–2.166 (–4.651 to 0.319)	0.0876
Difference, high minus low RAS	NA	NA	1.163	–2.213	–3.389 (–6.903 to 0.126)	0.0588
Survey scale: Communication Openness [continuous score; higher score=better]						
All sites	564	296	64.244	61.016	–3.241 (–4.863 to –1.618)	<0.0001
High RAS*	296	152	64	59.183	–4.848 (–7.264 to –2.432)	<0.0001
Low RAS	268	144	64.513	63.043	–1.464 (–3.534 to 0.605)	0.1655
Difference, high minus low RAS	NA	NA	–0.513	–3.86	–3.384 (–6.562 to –0.205)	0.0369
Survey scale: Organizational Learning [continuous score; higher score=better]						
All sites	564	296	64.389	60.862	–3.527 (–5.337 to –1.718)	0.0001
High RAS*	296	152	65.355	59.235	–6.114 (–8.631 to –3.597)	<0.0001
Low RAS	268	144	63.327	62.66	–0.676 (–3.120 to 1.769)	0.5881

	Number of Survey Respondents	Number of Sites with One or More Respondents	Early Survey (%)	Late Survey (%)	Adjusted Odds Ratio, Late Minus Early	P-value, Late Minus Early
Difference, high minus low RAS	NA	NA	2.028	–3.424	–5.438 (–8.949 to –1.927)	0.0024
Survey scale: Team Structure [continuous score; higher score=better]						
All sites	564	296	64.323	61.64	–2.674 (–3.934 to –1.414)	<0.0001
High RAS*	296	152	64.836	60.66	–4.172 (–5.939 to –2.404)	<0.0001
Low RAS	268	144	63.758	62.723	–1.021 (–2.761 to 0.719)	0.2503
Difference, high minus low RAS	NA	NA	1.078	–2.062	–3.151 (–5.631 to –0.671)	0.0128
Survey scale: Situation Monitoring [continuous score; higher score=better]						
All sites	564	296	63.455	61.32	–2.130 (–3.660 to –0.600)	0.0064
High RAS*	296	152	64.187	60.4	–3.777 (–5.676 to –1.878)	<0.0001
Low RAS	268	144	62.649	62.336	–0.315 (–2.673 to 2.043)	0.7937
Difference, high minus low RAS	NA	NA	1.538	–1.937	–3.462 (–6.490 to –0.435)	0.0250
Survey scale: Mutual Support [continuous score; higher score=better]						
All sites	564	296	67.095	64.88	–2.221 (–3.804 to –0.638)	0.0060
High RAS*	296	152	67.557	63.969	–3.596 (–5.706 to –1.485)	0.0008
Low RAS	268	144	66.584	65.883	–0.706 (–3.031 to 1.619)	0.552
Difference, high minus low RAS	NA	NA	0.973	–1.913	–2.890 (–6.028 to 0.247)	0.071
Survey scale: Values Alignment [continuous score; higher score=better]						
All sites	236	179	40.475	39.013	–1.415 (–3.395 to 0.565)	0.1613
High RAS*	134	97	41.757	40.764	–0.933 (–3.622 to 1.757)	0.4967
Low RAS	102	82	38.784	36.756	–2.028 (–4.924 to 0.868)	0.1699
Difference, high minus low RAS	NA	NA	2.973	4.007	1.095 (–2.851 to 5.042)	0.5864

NOTES: Scores weighted for survey nonresponse. Adjusted differences are from nonresponse-weighted linear models that account for survey version (clinician or other staff); site characteristics (presence of an EHR at baseline, presence of any medical home certification at baseline, presence of after-hours care at

baseline, number of sites, participation in any HRSA medical home program, total revenue per site); patient characteristics (mean HCC, percent disabled, percent female); and local area characteristics (percent household poverty in Census tract containing the site). Confidence intervals and p-values are from these weighted, adjusted models, with robust standard errors to account for site-level nonindependence of observations.

* "High RAS" defined as NCQA-level 2 or 3 equivalent on baseline RAS. "Low RAS" defined as NCQA-level 1 or lower on baseline RAS.

** NA denotes "not applicable" when adjusted regression models failed to converge due to small sample sizes, resulting in noncomputation of adjusted odds ratios and p-values.

Changes in Clinician and Staff Experience

As with the measures of clinic culture, CASE respondents reported worsening professional experiences between the baseline and follow-up fieldings of the CASE survey. Within the demonstration sites, there were statistically significant declines in Work Control and Stress scores from the Minimizing Errors/Maximizing Outcomes (MEMO) provider survey (Linzer, Manwell, et al., 2009) and overall professional satisfaction, coupled with statistically significant increases in burnout, perceptions of a chaotic working environment, and intent to leave the practice. These findings did not differ between sites with higher and lower baseline RAS scores (Exhibit A13.11—A13.12).

Among all CASE respondents, there were no statistically significant changes in "top of license" scores for physicians, nurse practitioners (NPs), physician assistants (PAs), nurses, "educators," or "clerks" between the baseline and follow-up CASE survey (see Exhibit A13.13). We also found that a statistically significant increase in "top of license" scores among nurses in sites with higher baseline RAS scores were counterbalanced by a statistically significant decrease in sites with lower baseline RAS scores. The opposite pattern prevailed for physicians, NPs, and PAs: There was a statistically significant increase in "top of license" scores among sites with lower baseline RAS scores but not among sites with higher baseline RAS scores.

Similarly, there were no statistically significant changes in the percentage of clinicians reporting that they had at least 75 percent of the time necessary to perform complete physicals, routine follow-up appointments, and urgent care appointments (see Exhibit A13.14). There were no differences between higher and lower baseline RAS sites for complete physicals and routine follow-up appointments. However, for urgent care appointments, a statistically significant increase among higher baseline RAS sites in the percentage reporting enough time was balanced by a significant decrease among lower baseline RAS sites—and these opposing trends were driven by differences in baseline response, converging on nearly identical values in the follow-up CASE survey.

Comparison with Other Studies

Compared with physicians responding to the MEMO survey, which was conducted in New York, Chicago, Milwaukee, and Madison (in sites serving a range of patient populations and sociodemographic profiles), FQHC demonstration participants reported somewhat higher job satisfaction (84 percent at baseline, relative to 79 percent in the MEMO sample), lower rates of burnout (23 percent at baseline, relative to 26.5 percent in the MEMO sample), lower rates of office chaos (31.6 percent at baseline, relative to 48 percent in the MEMO sample), and similar rates of being likely to leave their practices within two years (29 percent at baseline, relative to 30 percent in the MEMO sample).

Exhibit A13.11. Changes in Participant Experience, Stress

	Number of Survey Respondents	Number of Sites with One or More Respondents	Early Survey (%)	Late Survey (%)	Adjusted Odds Ratio, Late Minus Early	P-value, Late Minus Early
Survey scale: Work Control [continuous score; higher score=better]						
All sites	564	296	35.665	33.845	–1.798 (–3.504 to –0.092)	0.0389
High RAS*	296	152	34.668	32.547	–2.115 (–4.487 to 0.257)	0.0805
Low RAS	268	144	36.766	35.297	–1.431 (–3.885 to 1.023)	0.2530
Difference, high minus low RAS	NA**	NA	–2.097	–2.75	–0.684 (–4.095 to 2.727)	0.6944
Survey scale: Stress [continuous score; higher score=less stressful environment]						
All sites	564	296	45.541	43.071	–2.448 (–3.960 to –0.937)	0.0015
High RAS*	296	152	45.323	41.448	–3.838 (–5.886 to –1.790)	0.0002
Low RAS	268	144	45.78	44.875	–0.908 (–3.105 to 1.289)	0.4180
Difference, high minus low RAS	NA	NA	–0.457	–3.427	–2.930 (–5.934 to 0.073)	0.0558

NOTES: Scores weighted for survey nonresponse. Adjusted differences are from nonresponse-weighted linear models that account for survey version (clinician or other staff); site characteristics (presence of an EHR at baseline, presence of any medical home certification at baseline, presence of after-hours care at baseline, number of sites, participation in any HRSA medical home program, total revenue per site); patient characteristics (mean HCC, percent disabled, percent female); and local area characteristics (percent household poverty in Census tract containing the site). Confidence intervals and p-values are from these weighted, adjusted models, with robust standard errors to account for site-level nonindependence of observations.

* “High RAS” defined as NCQA-level 2 or 3 equivalent on baseline RAS. “Low RAS” defined as NCQA-level 1 or lower on baseline RAS.

** NA denotes “not applicable” when adjusted regression models failed to converge due to small sample sizes, resulting in noncomputation of adjusted odds ratios and p-values.

Exhibit A13.12. Changes in Participant Experience, Satisfaction

	Number of Survey Respondents	Number of Sites with One or More Respondents	Early Survey (%)	Late Survey (%)	Adjusted Odds Ratio, Late Minus Early	P-value, Late Minus Early
Survey item: Overall, I am satisfied with my current job. [Percent responding "Agree" or "Strongly agree"]						
All sites	564	296	84.2	74.4	0.540 (0.422 to 0.690)	<0.0001
High RAS*	296	152	84.2	72.7	0.496 (0.358 to 0.686)	<0.0001
Low RAS	268	144	84.3	76.3	0.597 (0.411 to 0.867)	0.0067
Difference, high minus low RAS	NA**	NA	–0.1	–3.6	0.830 (0.507 to 1.361)	0.4606
*Survey item: Using your own definition of "burnout," please indicate which statement best describes your situation at work. [Percent giving response indicative of burnout***]*						
All sites	563	296	23.0	31.5	1.567 (1.277 to 1.923)	<0.0001
High RAS*	295	152	23.4	32.3	1.583 (1.221 to 2.053)	0.0005
Low RAS	268	144	22.5	30.7	1.549 (1.120 to 2.142)	0.0081
Difference, high minus low RAS	NA	NA	0.9	1.6	1.022 (0.675 to 1.549)	0.9173
Survey item: Which best describes the atmosphere in your practice? [Percent responding 4 or greater on a scale from 1 "Calm" to 5 "Hectic, chaotic"]						
All sites	562	295	31.6	40.1	1.461 (1.192 to 1.790)	0.0003
High RAS*	295	152	30.4	40.4	1.572 (1.216 to 2.033)	0.0005
Low RAS	267	143	33.0	39.8	1.347 (0.978 to 1.854)	0.0680
Difference, high minus low RAS	NA	NA	–2.6	0.6	1.168 (0.774 to 1.760)	0.4596
Survey item: What is the likelihood that you will leave the practice within two years? [Percent responding "Moderately," "Likely," or "Definitely"]						
All sites	564	296	29.3	38.2	1.502 (1.218 to 1.853)	0.0001
High RAS*	296	152	31.7	38.7	1.380 (1.041 to 1.830)	0.0253
Low RAS	268	144	26.8	37.6	1.658 (1.212 to 2.270)	0.0016
Difference, high minus low RAS	NA	NA	4.9	1.2	0.832 (0.546 to 1.269)	0.3936

NOTES: Percentages weighted for survey nonresponse. Adjusted odds ratios are from nonresponse-weighted logistic models that account for survey version (clinician or other staff); site characteristics (presence of an EHR at baseline, presence of any medical home certification at baseline, presence of after-hours care at baseline, number of sites, participation in any HRSA medical home program, total revenue per site); patient characteristics (mean HCC, percent disabled, percent female); and local area characteristics (percent household poverty in Census tract containing the site). Confidence intervals and p-values are from these weighted, adjusted models, with robust standard errors to account for site-level nonindependence of observations.

* “High RAS” defined as NCQA-level 2 or 3 equivalent on baseline RAS. “Low RAS” defined as NCQA-level 1 or lower on baseline RAS.

** NA denotes “not applicable” when adjusted regression models failed to converge due to small sample sizes, resulting in noncomputation of adjusted odds ratios and p-values.

*** Responses indicative of burnout were: “I am definitely burning out and have one or more symptoms of burnout, such as physical and emotional exhaustion,” “The symptoms of burnout that I’m experiencing won’t go away. I think about frustrations at work a lot,” and “I feel completely burned out and often wonder if I can go on. I am at the point where I may need some changes or may need to seek some sort of help.”

Exhibit A13.13. Changes in Participant Experience, Top of License

	Number of Survey Respondents	Number of Sites with One or More Respondents	Early Survey (%)	Late Survey (%)	Adjusted Odds Ratio, Late Minus Early	P-value, Late Minus Early
Survey scale: Top of license – Physician/NP/PA [continuous score; higher score=greater share of time performing "top of license" activities]						
All sites	239	180	–1.668	–1.617	0.046 (–0.123 to 0.216)	0.5919
High RAS*	133	97	–1.637	–1.776	–0.133 (–0.351 to 0.085)	0.231
Low RAS	106	83	–1.707	–1.42	0.271 (0.009 to 0.534)	0.0430
Difference, high minus low RAS	NA**	NA	0.07	–0.356	–0.404 (–0.744 to –0.064)	0.0197
Survey scale: Top of license—Nurse [continuous score; higher score=greater share of time performing "top of license" activities]						
All sites	60	50	0.961	0.961	–0.005 (–0.303 to 0.292)	0.9721
High RAS*	34	30	0.872	1.113	0.236 (–0.170 to 0.643)	0.2547
Low RAS	26	20	1.069	0.711	–0.361 (–0.731 to 0.008)	0.0551
Difference, high minus low RAS	NA	NA	–0.197	0.402	0.598 (0.037 to 1.158)	0.0367
Survey scale: Top of license—Education [continuous score; higher score=greater share of time performing "top of license" activities]						
All sites	58	55	1.044	1.295	0.078 (–0.319 to 0.475)	0.7004
High RAS*	26	25	1.182	1.541	0.331 (–0.164 to 0.826)	0.1898
Low RAS	32	30	0.937	1.086	–0.201 (–0.783 to 0.381)	0.4989
Difference, high minus low RAS	NA	NA	0.244	0.455	0.532 (–0.231 to 1.295)	0.1718
Survey scale: Top of license—Clerk [continuous score; higher score=greater share of time performing "top of license" activities]						
All sites	58	48	3.442	3.404	–0.034 (–0.490 to 0.423)	0.8852
High RAS*	27	20	3.207	3.118	–0.002 (–0.886 to 0.882)	0.9964
Low RAS	31	28	3.659	3.644	–0.106 (–0.521 to 0.309)	0.6162

	Number of Survey Respondents	Number of Sites with One or More Respondents	Early Survey (%)	Late Survey (%)	Adjusted Odds Ratio, Late Minus Early	P-value, Late Minus Early
Difference, high minus low RAS	NA	NA	–0.451	–0.526	0.104 (–0.897 to 1.106)	0.8386

NOTES: Scores weighted for survey nonresponse. Adjusted differences are from nonresponse-weighted linear models that account for survey version (clinician or other staff); site characteristics (presence of an EHR at baseline, presence of any medical home certification at baseline, presence of after-hours care at baseline, number of sites, participation in any HRSA medical home program, total revenue per site); patient characteristics (mean HCC, percent disabled, percent female); and local area characteristics (percent household poverty in Census tract containing the site). Confidence intervals and p-values are from these weighted, adjusted models, with robust standard errors to account for site-level nonindependence of observations.

* “High RAS” defined as NCQA-level 2 or 3 equivalent on baseline RAS. “Low RAS” defined as NCQA-level 1 or lower on baseline RAS.

** NA denotes “not applicable” when adjusted regression models failed to converge due to small sample sizes, resulting in noncomputation of adjusted odds ratios and p-values.

Exhibit A13.14. Changes in Participant Experience, Time Management

	Number of Survey Respondents	Number of Sites with One or More Respondents	Early Survey (%)	Late Survey (%)	Adjusted Odds Ratio, Late Minus Early	P-value, Late Minus Early
Time pressure: Percentage of respondents reporting being allocated at least 75 percent of the time required to perform complete physicals for new patients						
All sites	234	178	33.9	40.3	1.319 (0.947 to 1.836)	0.1017
High RAS*	132	96	34.2	36.9	1.123 (0.735 to 1.714)	0.5917
Low RAS	102	82	33.6	44.6	1.606 (0.956 to 2.700)	0.0736
Difference, high minus low RAS	NA**	NA	0.5	–7.6	0.699 (0.358 to 1.365)	0.2944
Time pressure: Percentage of respondents reporting being allocated at least 75 percent of the time required to perform routine follow-up for established patients						
All sites	234	178	73.3	72.9	0.976 (0.671 to 1.419)	0.8972
High RAS*	132	96	71.9	67.6	0.802 (0.505 to 1.273)	0.3489
Low RAS	102	82	75.0	79.9	1.323 (0.701 to 2.496)	0.388
Difference, high minus low RAS	NA	NA	–3.1	–12.3	0.606 (0.276 to 1.330)	0.2117
Time pressure: Percentage of respondents reporting being allocated at least 75 percent of the time required to perform urgent care visits						
All sites	231	175	66.7	68.4	1.078 (0.758 to 1.533)	0.6762
High RAS*	129	93	54.4	68.8	1.904 (1.185 to 3.060)	0.0078
Low RAS	102	82	82.7	68.0	0.427 (0.248 to 0.736)	0.0022
Difference, high minus low RAS	NA	NA	–28.2	0.8	4.458 (2.166 to 9.175)	<.0001

NOTES: Percentages weighted for survey nonresponse. Adjusted odds ratios are from nonresponse-weighted logistic models that account for survey version (clinician or other staff); site characteristics (presence of an EHR at baseline, presence of any medical home certification at baseline, presence of after-hours care at baseline, number of sites, participation in any HRSA medical home program, total revenue per site); patient characteristics (mean HCC, percent disabled, percent female); and local area characteristics (percent household poverty in Census tract containing the site). Confidence intervals and p-values are from these weighted, adjusted models, with robust standard errors to account for site-level nonindependence of observations.

* "High RAS" defined as NCQA-level 2 or 3 equivalent on baseline RAS. "Low RAS" defined as NCQA-level 1 or lower on baseline RAS.

** NA denotes "not applicable" when adjusted regression models failed to converge due to small sample sizes, resulting in noncomputation of adjusted odds ratios and p-values.

What Are the Challenges to Practice Change?

Specialty Access

Access to specialty services did not increase in a statistically significant manner among demonstration sites, according to CASE respondents (see Exhibit A13.15). Approximately 21 percent of clinicians reported that it was easy to obtain timely new-patient office visits with specialists outside their sites at baseline, and while this percentage increased to 29 percent in the unadjusted data, there was no statistically significant increase after adjustment for confounders. A similar pattern of limited access was reported for specialist follow-up visits, for specialist procedures, and for mental health provider visits.

Exhibit A13.15. Access to Specialty Services

	Number of Survey Respondents	Number of Sites with One or More Respondents	Early Survey (%)	Late Survey (%)	Adjusted Odds Ratio, Late Minus Early	P-value, Late Minus Early
Survey item: How difficult is it for providers in your practice to obtain timely new-patient office visits with specialists or subspecialists outside your practice? [Percent responding "Easy"]						
All sites	546	289	21.7	29.0	0.893 (0.633 to 1.260)	0.5203
High RAS*	285	149	25.1	28.8	0.734 (0.481 to 1.120)	0.1516
Low RAS	261	140	17.2	29.3	1.195 (0.687 to 2.079)	0.5291
Difference, high minus low RAS	NA**	NA	8.0	–0.5	0.614 (0.315 to 1.200)	0.1538
Survey item: How difficult is it for providers in your practice to obtain timely follow-up office visits with specialists or subspecialists outside your practice? [Percent responding "Easy"]						
All sites	542	288	33.0	39.2	0.966 (0.702 to 1.331)	0.8335
High RAS*	283	149	36.0	38.1	0.823 (0.561 to 1.208)	0.3202
Low RAS	259	139	29.1	40.3	1.202 (0.721 to 2.002)	0.4809
Difference, high minus low RAS	NA	NA	6.9	–2.1	0.685 (0.371 to 1.265)	0.2270
Survey item: How difficult is it for providers in your practice to obtain timely procedures with specialists or subspecialists outside your practice? [Percent responding "Easy"]						
All sites	540	288	25.8	32.0	0.932 (0.677 to 1.285)	0.6686
High RAS*	282	149	29.7	30.1	0.710	0.1038

	Number of Survey Respondents	Number of Sites with One or More Respondents	Early Survey (%)	Late Survey (%)	Adjusted Odds Ratio, Late Minus Early	P-value, Late Minus Early
					(0.471 to 1.073)	
Low RAS	258	139	20.7	34.1	1.369 (0.836 to 2.242)	0.2115
Difference, high minus low RAS	NA	NA	9.0	–4.0	0.519 (0.279 to 0.964)	0.0378
Survey item: How difficult is it for providers in your practice to obtain high-quality mental health services? [Percent responding "Easy"]						
All sites	543	289	21.6	35.0	1.078 (0.780 to 1.490)	0.6502
High RAS*	284	149	23.2	33.1	1.000 (0.671 to 1.488)	0.9989
Low RAS	259	140	19.5	37.0	1.190 (0.697 to 2.031)	0.5233
Difference, high minus low RAS	NA	NA	3.8	–4.0	0.840 (0.432 to 1.632)	0.6068

NOTES: Percentages weighted for survey nonresponse. Adjusted odds ratios are from nonresponse-weighted logistic models that account for survey version (clinician or other staff); site characteristics (presence of an EHR at baseline, presence of any medical home certification at baseline, presence of after-hours care at baseline, number of sites, participation in any HRSA medical home program, total revenue per site); patient characteristics (mean HCC, percent disabled, percent female); and local area characteristics (percent household poverty in Census tract containing the site). Confidence intervals and p-values are from these weighted, adjusted models, with robust standard errors to account for site-level nonindependence of observations.
* "High RAS" defined as NCQA-level 2 or 3 equivalent on baseline RAS. "Low RAS" defined as NCQA-level 1 or lower on baseline RAS.
** NA denotes "not applicable" when adjusted regression models failed to converge due to small sample sizes, resulting in noncomputation of adjusted odds ratios and p-values.

How Do the Interventions Help Sites Overcome Challenges?

Lack of access to specialists and mental health services may challenge FQHC sites' transformation into APCPs. However, there were no statistically significant changes in the percentage of CASE respondents reporting that their sites were making efforts to increase the amount of care that patients receive from specialists and the availability of mental health services (see Exhibit A13.16).

Exhibit A13.16. Increases or Decreases in Specialty Service Access

	Number of Survey Respondents	Number of Sites with One or More Respondents	Early Survey (%)	Late Survey (%)	Adjusted Odds Ratio, Late Minus Early	P-value, Late Minus Early
Survey item: On the balance, is your practice making efforts to increase or decrease the amount of care your patients get from specialists? [Percent responding "Increase"]						

	Number of Survey Respondents	Number of Sites with One or More Respondents	Early Survey (%)	Late Survey (%)	Adjusted Odds Ratio, Late Minus Early	P-value, Late Minus Early
All sites	563	296	21.4	23.3	1.121 (0.866 to 1.451)	0.3844
High RAS*	295	152	22.2	25.6	1.216 (0.863 to 1.712)	0.2639
Low RAS	268	144	20.5	20.7	1.018 (0.685 to 1.511)	0.9314
Difference, high minus low RAS	NA**	NA	1.7	4.9	1.195 (0.707 to 2.018)	0.5060
Survey item: On the balance, is your practice making efforts to increase or decrease the availability of mental health services in your practice? [Percent responding "Increase"]						
All sites	564	296	62.4	62.9	1.029 (0.825 to 1.283)	0.8003
High RAS*	296	152	63.1	62.6	0.986 (0.726 to 1.339)	0.9287
Low RAS	268	144	61.6	63.3	1.078 (0.786 to 1.479)	0.6423
Difference, high minus low RAS	NA	NA	1.5	–0.7	0.915 (0.590 to 1.420)	0.6918

NOTES: Percentages weighted for survey nonresponse. Adjusted odds ratios are from nonresponse-weighted logistic models that account for survey version (clinician or other staff); site characteristics (presence of an EHR at baseline, presence of any medical home certification at baseline, presence of after-hours care at baseline, number of sites, participation in any HRSA medical home program, total revenue per site); patient characteristics (mean HCC, percent disabled, percent female); and local area characteristics (percent household poverty in Census tract containing the site). Confidence intervals and p-values are from these weighted, adjusted models, with robust standard errors to account for site-level nonindependence of observations.
* "High RAS" defined as NCQA-level 2 or 3 equivalent on baseline RAS. "Low RAS" defined as NCQA-level 1 or lower on baseline RAS.
** NA denotes "not applicable" when adjusted regression models failed to converge due to small sample sizes, resulting in noncomputation of adjusted odds ratios and p-values.

Do Demonstration FQHCs Provide Better or Enhanced Access to Medicare Beneficiaries' PCMH Providers?

The percentage of CASE respondents reporting that their sites were making efforts to increase the availability of transportation to and from sites increased from approximately 30 percent to 34 percent, but this increase was not statistically significant and had no association with baseline RAS score (Exhibit A13.17).

Exhibit A13.17. Provision of Patient Transportation

	Number of Survey Respondents	Number of Sites with One or More Respondents	Early Survey (%)	Late Survey (%)	Adjusted Odds Ratio, Late Minus Early	P-value, Late Minus Early
Survey item: On the balance, is your practice making efforts to increase or decrease the availability of transportation to and from your practice? [Percent responding "Increase"]						
All sites	564	296	30.1	34.3	1.222 (0.989 to 1.509)	0.0636
High RAS*	296	152	31.3	35.6	1.231 (0.924 to 1.641)	0.1554
Low RAS	268	144	28.7	32.7	1.211 (0.885 to 1.656)	0.2307
Difference, high minus low RAS	NA**	NA	2.6	2.9	1.017 (0.665 to 1.555)	0.9391

NOTES: Percentages weighted for survey nonresponse. Adjusted odds ratios are from nonresponse-weighted logistic models that account for survey version (clinician or other staff); site characteristics (presence of an EHR at baseline, presence of any medical home certification at baseline, presence of after-hours care at baseline, number of sites, participation in any HRSA medical home program, total revenue per site); patient characteristics (mean HCC, percent disabled, percent female); and local area characteristics (percent household poverty in Census tract containing the site). Confidence intervals and p-values are from these weighted, adjusted models, with robust standard errors to account for site-level nonindependence of observations.
* "High RAS" defined as NCQA-level 2 or 3 equivalent on baseline RAS. "Low RAS" defined as NCQA-level 1 or lower on baseline RAS.
** NA denotes "not applicable" when adjusted regression models failed to converge due to small sample sizes, resulting in noncomputation of adjusted odds ratios and p-values.

Summary: Access to Information and Services (Baseline CASE Survey)

The percentages of CASE respondents reporting that their sites were making efforts to increase the number of office visits with patients or the amount of patient care via telephone did not change between the baseline and follow-up CASE surveys (see Exhibit A13.18). However, the percentage reporting that their sites were making efforts to increase the amount of patient care via email increased from 26 percent at baseline to nearly 35 percent at follow-up (p=0.0002). Because the CASE survey was not fielded outside the demonstration sites, it is impossible to know whether this increase in efforts to deliver care via email was driven by the demonstration itself or by other interventions (e.g., meaningful use incentives).

Exhibit A13.18. Patient Contact

	Number of Survey Respondents	Number of Sites with One or More Respondents	Early Survey (%)	Late Survey (%)	Adjusted Odds Ratio, Late Minus Early	P-value, Late Minus Early
Survey item: On the balance, is your practice making efforts to increase or decrease the number of office visits with patients? [Percent responding "Increase"]						
All sites	564	296	57.2	59.6	1.110 (0.890 to 1.385)	0.3549
High RAS*	296	152	58.8	62.4	1.171 (0.872 to 1.573)	0.295
Low RAS	268	144	55.4	56.5	1.048 (0.752 to 1.462)	0.7812
Difference, high minus low RAS	NA**	NA	3.4	5.9	1.117 (0.716 to 1.743)	0.6257
Survey item: On the balance, is your practice making efforts to increase or decrease the amount of patient care via telephone? [Percent responding "Increase"]						
All sites	563	296	23.7	23.4	0.980 (0.771 to 1.246)	0.8692
High RAS*	295	152	24.2	24.1	0.993 (0.701 to 1.406)	0.9677
Low RAS	268	144	23.2	22.6	0.965 (0.697 to 1.337)	0.8317
Difference, high minus low RAS	NA	NA	1.0	1.4	1.029 (0.639 to 1.656)	0.9079
Survey item: On the balance, is your practice making efforts to increase or decrease the amount of patient care via email? [Percent responding "Increase"]						
All sites	562	295	25.8	34.9	1.565 (1.231 to 1.988)	0.0002
High RAS*	295	152	27.2	38.1	1.676 (1.214 to 2.313)	0.0017
Low RAS	267	143	24.3	31.3	1.444 (1.010 to 2.064)	0.0439
Difference, high minus low RAS	NA	NA	2.9	6.8	1.161 (0.718 to 1.878)	0.5431

NOTES: Percentages weighted for survey nonresponse. Adjusted odds ratios are from nonresponse-weighted logistic models that account for survey version (clinician or other staff); site characteristics (presence of an EHR at baseline, presence of any medical home certification at baseline, presence of after-hours care at baseline, number of sites, participation in any HRSA medical home program, total revenue per site); patient characteristics (mean HCC, percent disabled, percent female); and local area characteristics (percent household poverty in Census tract containing the site). Confidence intervals and p-values are from these weighted, adjusted models, with robust standard errors to account for site-level nonindependence of observations.

* "High RAS" defined as NCQA-level 2 or 3 equivalent on baseline RAS. "Low RAS" defined as NCQA-level 1 or lower on baseline RAS.

** NA denotes "not applicable" when adjusted regression models failed to converge due to small sample sizes, resulting in noncomputation of adjusted odds ratios and p-values.

Summary: Adherence to Evidence-Based Guidelines

The CASE survey provides data pertinent to one of our evidence-based domain measures, the provision of nutrition and weight loss services. Providing such services is concordant with guidelines for several patient groups salient to the demonstration (e.g., those with obesity, diabetes, and osteoarthritis of weight-bearing joints). There was no change over time in the percentage of CASE respondents who reported that their sites were making efforts to increase the availability of nutrition or weight loss services (see Exhibit A13.19).

Exhibit A13.19. Provision of Nutrition Services

	Number of Survey Respondents	Number of Sites with One or More Respondents	Early Survey (%)	Late Survey (%)	Adjusted Odds Ratio, Late Minus Early	P-value, Late Minus Early
Survey item: On the balance, is your practice making efforts to increase or decrease the availability of nutrition or weight reduction services in your practice? [Percent responding "Increase"]						
All sites	564	296	52.4	50.8	0.938 (0.755 to 1.167)	0.5662
High RAS*	296	152	51.2	47.1	0.849 (0.610 to 1.181)	0.3312
Low RAS	268	144	53.9	54.9	1.043 (0.790 to 1.378)	0.7665
Difference, high minus low RAS	NA**	NA	–2.7	–7.8	0.814 (0.528 to 1.254)	0.3498

NOTES: Percentages weighted for survey nonresponse. Adjusted odds ratios are from nonresponse-weighted logistic models that account for survey version (clinician or other staff); site characteristics (presence of an EHR at baseline, presence of any medical home certification at baseline, presence of after-hours care at baseline, number of sites, participation in any HRSA medical home program, total revenue per site); patient characteristics (mean HCC, percent disabled, percent female); and local area characteristics (percent household poverty in Census tract containing the site). Confidence intervals and p-values are from these weighted, adjusted models, with robust standard errors to account for site-level nonindependence of observations.
* "High RAS" defined as NCQA-level 2 or 3 equivalent on baseline RAS. "Low RAS" defined as NCQA-level 1 or lower on baseline RAS.
** NA denotes "not applicable" when adjusted regression models failed to converge due to small sample sizes, resulting in noncomputation of adjusted odds ratios and p-values.

Summary: Coordination of Care

Care coordination includes information flow to FQHC sites from providers who share patients with such sites and proactive continuity of care with hospitalized patients. Baseline CASE survey analyses showed that approximately 47 percent of respondents reported that hospitals usually or often notified their sites of patient admissions, and this percentage did not increase by the time of the follow-up survey. Similarly, there were no statistically significant changes over time in rates of demonstration site clinicians visiting

their hospitalized patients (26 percent at baseline), respondents reporting that EDs notified their sites of visits (39 percent), or receiving discharge summaries from hospitals and EDs (63 percent). There was also no significant change in the percentage of respondents reporting that their sites were making efforts to increase the number of patients who see a provider in the clinic within two weeks after a hospitalization (Exhibit A13.20).

Exhibit A13.20. Coordination and Continuity of Care

	Number of Survey Respondents	Number of Sites with One or More Respondents	Early Survey (%)	Late Survey (%)	Adjusted Odds Ratio, Late Minus Early	P-value, Late Minus Early
Survey item: Thinking about the hospital to which your patients are most commonly admitted, if a patient is admitted to the hospital or emergency department, how often does the hospital notify you that your patient has been admitted? [Percent responding "Usually" or "Often"]						
All sites	234	178	47.5	48.0	1.020 (0.752 to 1.385)	0.8968
High RAS*	132	96	51.3	49.0	0.906 (0.614 to 1.337)	0.6178
Low RAS	102	82	42.7	46.6	1.190 (0.731 to 1.939)	0.4844
Difference, high minus low RAS	NA**	NA	8.7	2.4	0.761 (0.407 to 1.421)	0.3912
Survey item: Thinking about the hospital to which your patients are most commonly admitted, if a patient is admitted to the hospital or emergency department, how often does one of the doctors or nurses from your practice visit the patient in the hospital? [Percent responding "Usually" or "Often"]						
All sites	235	178	25.8	22.9	0.849 (0.630 to 1.145)	0.2838
High RAS*	133	96	23.1	18.9	0.759 (0.473 to 1.217)	0.2521
Low RAS	102	82	29.3	28.2	0.958 (0.666 to 1.377)	0.8168
Difference, high minus low RAS	NA	NA	–6.2	–9.3	0.792 (0.438 to 1.434)	0.4413
Survey item: Thinking about the hospital to which your patients are most commonly admitted, if a patient is admitted to the hospital or emergency department, how often does the emergency department notify you that your patient has had an emergency room visit? [Percent responding "Usually" or "Often"]						
All sites	236	179	39.0	43.9	1.251 (0.904 to 1.733)	0.1768
High RAS*	134	97	40.9	44.4	1.167 (0.757 to 1.800)	0.4833
Low RAS	102	82	36.5	43.3	1.371 (0.843 to 2.230)	0.2028

	Number of Survey Respondents	Number of Sites with One or More Respondents	Early Survey (%)	Late Survey (%)	Adjusted Odds Ratio, Late Minus Early	P-value, Late Minus Early
Difference, high minus low RAS	NA	NA	4.4	1.0	0.851 (0.446 to 1.626)	0.6259
Survey item: Thinking about the hospital to which your patients are most commonly admitted, if a patient is admitted to the hospital or emergency department, how often does your clinic receive a discharge summary or report from the hospital to which your patients are usually admitted? [Percent responding "Usually" or "Often"]						
All sites	236	179	62.6	64.9	1.112 (0.824 to 1.501)	0.4871
High RAS*	134	97	65.1	68.6	1.184 (0.805 to 1.740)	0.3916
Low RAS	102	82	59.4	60.1	1.030 (0.644 to 1.648)	0.9004
Difference, high minus low RAS	NA	NA	5.7	8.6	1.149 (0.626 to 2.109)	0.6550
Survey item: On the balance, is your practice making efforts to increase or decrease the number of patients who see a provider in your clinic within 2 weeks after a hospitalization? [Percent responding "Increase"]						
All sites	563	296	69.0	72.3	1.182 (0.939 to 1.488)	0.1545
High RAS*	295	152	69.5	72.2	1.145 (0.825 to 1.591)	0.4177
Low RAS	268	144	68.4	72.4	1.223 (0.887 to 1.686)	0.2192
Difference, high minus low RAS	NA	NA	1.2	–0.1	0.937 (0.592 to 1.482)	0.7800

NOTES: Percentages weighted for survey nonresponse. Adjusted odds ratios are from nonresponse-weighted logistic models that account for survey version (clinician or other staff); site characteristics (presence of an EHR at baseline, presence of any medical home certification at baseline, presence of after-hours care at baseline, number of sites, participation in any HRSA medical home program, total revenue per site); patient characteristics (mean HCC, percent disabled, percent female); and local area characteristics (percent household poverty in Census tract containing the site). Confidence intervals and p-values are from these weighted, adjusted models, with robust standard errors to account for site-level nonindependence of observations.
* "High RAS" defined as NCQA-level 2 or 3 equivalent on baseline RAS. "Low RAS" defined as NCQA-level 1 or lower on baseline RAS.
** NA denotes "not applicable" when adjusted regression models failed to converge due to small sample sizes, resulting in noncomputation of adjusted odds ratios and p-values.

Summary: Reduction/Elimination of Disparities

Health disparities may be affected by the availability of interpreter services. There was no statistically significant change in the percentage of CASE respondents reporting that it was easy to obtain interpreter services for non–English-speaking patients between the baseline and follow-up CASE surveys (see Exhibit A13.21). There also was no

statistically significant change in the percentage of respondents reporting that their sites were making efforts to increase the availability of interpreter services.

Exhibit A13.21. Provision of Interpreter Services

	Number of Survey Respondents	Number of Sites with One or More Respondents	Early Survey (%)	Late Survey (%)	Adjusted Odds Ratio, Late Minus Early	P-value, Late Minus Early
Survey item: How difficult is it for providers in your practice to obtain interpreter services for non–English-speaking patients when they receive care from your practice? [Percent responding "Easy"]						
All sites	540	286	58.3	62.9	0.949 (0.691 to 1.303)	0.7479
High RAS*	286	148	59.0	61.8	0.939 (0.637 to 1.382)	0.7481
Low RAS	254	138	57.4	64.1	0.963 (0.594 to 1.561)	0.8774
Difference, high minus low RAS	NA**	NA	1.6	–2.3	0.975 (0.540 to 1.761)	0.9328
Survey item: On the balance, is your practice making efforts to increase or decrease the availability of interpreter services in your practice? [Percent responding "Increase"]						
All sites	563	295	39.9	42.1	1.097 (0.888 to 1.356)	0.3913
High RAS*	296	152	44.5	43.5	0.964 (0.709 to 1.312)	0.8171
Low RAS	267	143	34.9	40.5	1.271 (0.953 to 1.697)	0.1027
Difference, high minus low RAS	NA	NA	9.5	3.1	0.758 (0.497 to 1.157)	0.1993

NOTES: Percentages weighted for survey nonresponse. Adjusted odds ratios are from nonresponse-weighted logistic models that account for survey version (clinician or other staff); site characteristics (presence of an EHR at baseline, presence of any medical home certification at baseline, presence of after-hours care at baseline, number of sites, participation in any HRSA medical home program, total revenue per site); patient characteristics (mean HCC, percent disabled, percent female); and local area characteristics (percent household poverty in Census tract containing the site). Confidence intervals and p-values are from these weighted, adjusted models, with robust standard errors to account for site-level nonindependence of observations.

* "High RAS" defined as NCQA-level 2 or 3 equivalent on baseline RAS. "Low RAS" defined as NCQA-level 1 or lower on baseline RAS.

** NA denotes "not applicable" when adjusted regression models failed to converge due to small sample sizes, resulting in noncomputation of adjusted odds ratios and p-values.

Summary of CASE Survey Results

The CASE survey, which was fielded in an "early" or "baseline" wave (between April 22, 2013, and August 30, 2013) and 14 months later in a "late" or "follow-up" wave (between June 8, 2014, and October 22, 2014) among clinicians and staff in demonstration sites only, measured changes in four broad areas: uptake of demonstration technical assistance, clinic culture and teamwork, work experience, and challenges to practice change. By area, the results are summarized as follows:

- **Uptake of demonstration technical assistance.** Between the early and late CASE surveys, clinicians became significantly more likely over time to be aware that their sites were participating in a project to become a medical home and to have seen a feedback report for being a medical home, but sites with high baseline RAS scores were less likely to have found this information useful.
- **Clinic culture and teamwork.** Between the early and late CASE surveys, clinicians and staff reported significant worsening on multiple measures of clinic culture and teamwork. For most of these measures, the degree of worsening was significantly greater among sites with high baseline RAS scores than among sites with lower baseline RAS scores.
- **Work experience.** Between the early and late CASE surveys, clinicians and staff reported significant reductions in overall professional satisfaction and corresponding increases in stress, burnout, chaos, and likelihood of leaving their practices. These changes were similar in sites with high and low baseline RAS scores.
- **Challenges to practice change.** Fewer than one-third of responding clinicians reported easy access to subspecialists outside the practice, including mental health providers. The majority of CASE respondents reported that their practices were making efforts to increase access to mental health services, but there were no statistically significant changes in reported ease of access to mental health or other specialists between the early and late CASE surveys.

All of these results should be considered with an important caveat: Because the CASE survey was not fielded among comparison sites, observed changes over time are not necessarily attributable to the demonstration itself. Contemporaneous changes affecting all FQHCs and other types of primary care practices, such as the uptake of EHRs and expansions of coverage under the Affordable Care Act, also could explain the changes we observed.

However, taken together, these findings from the CASE survey suggest that during the period of the demonstration, participating practices experienced significant stress, which manifested in detectable ways: worsening on multiple dimensions of practice culture and on multiple dimensions of professional satisfaction.

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