The National Committee for Quality Assurance (NCQA) field tested a new version of the Consumer Assessment of Healthcare Providers and Services Clinician & Group Survey (CG-CAHPS) specifically designed to evaluate Patient-Centered Medical Homes (PCMH). This version of the Clinician & Group Survey incorporates new items to address domains of care identified through a multi-stakeholder input as critical for evaluating the functioning of PCMH practices. This report summarizes the rationale for using patient experiences in the evaluation of medical homes, efforts to prioritize domains for incorporation in the survey, and the decision to build on the existing CAHPS survey. In addition, we summarize results of the field test and recommendations from the CAHPS survey team for the PCMH Clinician & Group Survey.

BACKGROUND AND SIGNIFICANCE

The Patient-Centered Medical Home (PCMH) continues to gain momentum as a model for improving delivery of primary care. In many states, practices are eligible for financial incentives for adopting the medical home model, and the federal government has joined multi-payor demonstrations and is supporting efforts to deploy the model in community health centers. NCQA's Patient-Centered Medical Home (PCMH) recognition program is the most widely used method for qualifying practices for rewards in multi-payor demonstrations. Over 2,000 practices representing more than 10,000 physicians have achieved recognition. NCQA recently released updated standards (PCMH 2011).

Giving more prominence to patient engagement was a key focus in the development of PCMH 2011. Several commentators argued that NCQA's original program did not have sufficient emphasis on the "patient's voice," and early results questioned whether implementing systematic processes associated with medical home would support improved patient experiences. A number of stakeholders recommended that NCQA consider measures of patient experiences results as part of the PCMH evaluation.

With funding from The Commonwealth Fund, NCQA undertook efforts to incorporate patient and family feedback into requirements for practices seeking PCMH recognition. Our overall goal was to identify feasible and sustainable approaches for evaluating practices on the results of patient experiences, including:

- A core set of survey items, representing a full range of the functions of medical homes and the patient experiences;
- A defined sampling process, which is auditable and captures the types of patients for whom medical home services are most critical;
- A specified data collection process, including mode(s) and timing of data collection; and
- A fair scoring approach, that creates valid and meaningful benchmarks.

We convened a technical expert panel, reviewed evidence on effective care practices and existing surveys, elicited broad public input on priorities for patient experiences surveys, and summarized existing efforts to assess patient experiences of care at the physician and practice level. In addition, we worked with the CAHPS consortium sponsored by the federal Agency for Healthcare Research and Quality (AHRQ) to develop a new version of the CAHPS Clinician & Group Survey to address specific processes of care relevant to patient-centered medical homes.

DEVELOPMENT OF THE PCMH SURVEY

It is important to note that NCQA's effort to identify domains and items included a broad review of survey tools in addition to including the CAHPS survey. This section describes NCQA's efforts to identify potential content and the eventual decision to collaborate with the CAHPS Consortium on a PCMH version of the Clinician & Group Survey.

With assistance from a technical panel of experts in survey research, we reviewed 22 surveys identified from existing literature on patient-centered care or,used in PCMH evaluations and in cross-national comparisons. We identified 616 items that focus on patient experiences. With advice from the technical panel and the PCMH Advisory Committee, we identified 19 potential topics for inclusion in a patient survey.

In February - March 2010, NCQA sought public comment on priorities for topics that should be included in patient experiences surveys for evaluating practices that want to serve as medical homes. Using a web-based survey tool, we invited public feedback to to rank five topics as high priority and five as low priority. We disseminated the request for public comment through NCQA's outreach list as well as through the Patient-Centered Primary Care Collaborative and other relevant groups. We received feedback from 1840 respondents; respondents reflected a variety of stakeholder perspectives including patient/consumer/caregiver/advocates (44%), clinicians (49%), and others (Employer/Purchaser, Researcher). Because all topics in patient-centeredness could be considered important, we used a specific sorting approach that required respondents to nominate high and low priority topics. The survey tool required respondents to name a maximum of five high priority and five low priority measures. This approach allowed us to observe the topics receiving the most "high priority" votes.

The topics receiving the most votes for "high priority" are listed in order below.

1. Listens and answers your questions
2. Involves you in decisions about your care
3. Explains care to you
4. Is aware of care you get from other doctors or places
5. Follows up on your test results
6. Helps you manage your health
7. Seeing the same doctor or nurse

Patients and clinicians comments agreed in the top six ranked topics. There were no differences by gender, but "Is aware of your medications" received the third highest number of "high priority" votes among respondents aged 65 and older. Interestingly, "seeing the same doctor or nurse" received about the same number of high priority and low priority votes.

After reviewing these results, our technical experts and the PCMH Advisory Committee recommended we consider stakeholder priorities, the evidence-base about factors that affect quality, and key domains proposed for the PCMH 2011 standards in identifying content for the survey. The domains recommended by the panels included:

- Communication
- Access
- Coordination
- Shared decision-making
- Self management support
- Whole person orientation/continuity
- Comprehensiveness

In determining whether to select an existing survey tool or develop a new tool, we used the following criteria: 1) does the tool address high-priority domains, 2) is the tool in widespread use or does it have national endorsement; 3) is the tool applicable to diverse populations (including

children and adults, available in different languages), and 4) how long is the survey. We considered six existing survey tools: the CAHPS Clinician & Group Survey (including core and supplemental items), the Ambulatory Care Experiences Survey (Safran), the Components of Primary Care Index (Flocke), Primary Care Assessment Tool (Starfield), Patient Experience Assessment Tool (TransforMed), and the How's Your Health survey (Wasson). With input from our panels, we decided to build on the CAHPS Clinician & Group Survey rather than using other existing surveys or creating a new stand-alone survey. The CAHPS Clinician & Group Survey was chosen because it is already widely used throughout the country, represented the content well, is the only nationally endorsed patient experiences survey, and has multiple versions (https://www.cahps.ahrq.gov/default.asp). Furthermore, the CAHPS research team had separate efforts underway to seek public input on items for a PCMH version of the CAHPS Clinician & Group Survey. Thus, we were able to merge our efforts with those of the CAHPS Consortiumto develop and test a new survey for evaluating the PCMH.

NCQA worked with the CAHPS Consortiumon a Medical Home version of the CAHPS Clinician & Group Survey (CAHPS PCMH Survey) to incorporate the technical expert panel and committees' input on survey content and proposed domains. We identified a list of topics and potential items, often drawn from existing surveys. These items were included in the PCMH 2011 call for public comment. We also worked with the CAHPS Consortium to develop new items. The CAHPS Consortium conducted focus groups and cognitive testing in English and Spanish with adult patients and parents of pediatric patients and included both patients in medical home practices and those in primary care practices that are not categorized as medical homes. The PCMH Survey underwent cognitive testing last fall followed by a field test of draft versions of both the adult and child CAHPS PCMH Survey conducted by NCQA. The field test version of the PCMH survey included 115 items; in several cases we included items from existing surveys as well as new items addressing the same content using CAHPS principles to maintain a level of standardization of survey questions.

FIELD TEST METHODS

NCQA contracted with the Massachusetts Health Quality Partners (MHQP) to oversee a field test. MHQP is a not-for-profit coalition of physicians, hospitals, health plans, purchasers, consumers, academics, and government agencies that collects and publishes quality information to support quality improvement among clinicians and practices and informed decision-making among consumers. MHQP was responsible for executing data use agreements with all participating practices,developing the survey protocol, sampling plan and all survey materials. MHQP contracted with a survey vendor to administer the survey as a two-wave mail survey.

Study population

Forty-three (10 Adult and 33 Child) practices in the State of Massachusetts participated in the field test. Twenty practices, including 10 sites serving adults and 10 serving children were recruited for the field test. An additional 23 pediatric sites participated through funding of the Pediatrics Physicians' Organization (PPOC) at Children's for practices within its network affiliated with Children's Hospital of Boston.

The study focused on adult and pediatric patients who receive care at primary care practices in Massachusetts. The study group included any patient with a visit at the practice in the prior year (from July 16, 2009 to July 15, 2010). A parent or guardian was asked to complete the survey for eligible children.

Approximately 800 patients were surveyed from each practice to yield a completed survey sample of 200 per practice. To reduce patient burden, the sample was de-duplicated so that only one adult member per household was included.

Procedures

Practice Recruitment

MHQP recruited practices from local health networks including a collaborative of safety net providers. Participating practices provided patient administrative data to MHQP's survey vendor to identify sufficient number of sampled patients (approximately 800) to yield a minimum 200 completed surveys for each practice.

Survey Protocol

A two-wave mail survey protocol was used.

- 1st wave: Monday, November 15, 2010
- Response data drawn for 2nd wave Monday, December 20, 2010 (5 weeks after wave 1)
- 2nd wave: Monday, January 3, 2011
- End of fielding: Friday, February 4, 2011 (5 weeks after wave 2)

Providers Included

All primary care providers who are impaneled at participating practices were included. Primary care specialties included were: Internal Medicine, Family Medicine, General Medicine, and Pediatrics. Nurse practitioners with patient panels were also included. Note that OB/GYN practitioners and residents were not included as primary care providers.

Eligible Population

We included patients of all payor types, including commercial, Medicare and Medicaid beneficiaries as well as uninsured patients, which represented about 8 percent of the sample mostly from the community health centers. The pediatric sample included children age 0 to 17 and the adult sample included patients age 18 and over. The sampling frame was created with data provided to the survey vendor by participating practices and health centers. Patients were assigned to sites using visit, enrollment and site data provided by sites: All patients with an eligible visit to a site were equally likely to be sampled for the site regardless of the number of visits, type of visit, or number of providers seen. Patients were randomly selected at the site level sample for each adult or pediatric site to be included in the survey ensuring that no more than one patient per address is sampled across the entire project. Patients were selected in sufficient numbers to obtain 200 completed surveys per site. Sampling started at sites with the smallest available sample frame in order to minimize the potential impact of cross-site de-duplication on achieving the desired sample sizes. Final site sample sizes were determined according to payer mix as follows:

- Practices having a majority of patients covered by Medicaid or other non-commercial payer (excluding Medicare) were sampled approximately 833 patients per site
- Practices having a majority of patients covered by commercial insurers or Medicare were sampled approximately 667 patients per site.
- Sites included in the survey through PPOC participation and not included as field test sites were sampled according to a variable sampling scheme based on the number of physicians at the practice.

The PCMH CAHPS pilot survey instruments are focused on the patient experience of care for a a provider and the practice site. At the start of the survey patients were asked to confirm that they received care from a named provider. Once the site level sample was drawn, sample patients were assigned to the provider with whom they had the most recent visit and this provider was the provider named on the survey. The visit timeframe across sites was used to determine most recent visit and provider.

A running list of all households selected for the sample for any physician was maintained as the *household participation list.* One patient per household was surveyed across survey types (adult and pediatric).

Analysis
The survey vendor conducted the analysis of response rates. All other analyses were conducted by the Yale-Harvard CAHPS team. Initial analyses considered the rate of missing and valid responses and the performance level for each item. Other analyses included a principal components factor analysis for all items, item-to-total correlations and internal consistency for proposed composites, and correlations among composites.

FIELD TEST RESULTS

Response rates
The overall response rate for the field test was about 25% yielding 4,875 surveys for analysis (25.4 for adults in 10 practices and 25.6 for children in 33 practices. The response rates were higher in the adult group and in pediatric sites affiliated with Boston Children's hospital. These responses rates are lower than seen in other surveys; the timing of the survey fielding (during the winter holidays) and the length of time between the selection of the sample and the second survey wave probably contributed to lower response rates. Analysis of non-respondents showed that older patients and patients with more visits and chronic conditions were more likely to respond to the adult survey. Type of insurance was the key factor affecting response in the child survey; limited resources and time available for field test prevented the use of telephone follow-up which has typically boosted response rates in sites serving large numbers of Medicaid patients.

Domains
See Attachments 1 and 2 for the field test versions of the Adult and Child surveys. Table 3 summarizes the CAHPS Consortium'srecommendations for domains of the PCMH CAHPS, along with the item counts for each domain. The adult survey includes 58 items and the pediatric version includes 67 items. This is a 50% reduction in length from the PCMH survey prepared for the field test. This content represents the CG-CAHPS core plus new items.

Attachments 3 and 4 include the full analysis of item-level responses for the adult and child surveys respectively, including the percentages of valid responses and the performance rates. **Attachment 5** includes a summary of results by domain. Items that were not recommended for inclusion in the CAHPS PCMH survey are listed at the end of this document.

Access
The C&G CAHPS core survey includes 5 items on Access. Two additional items were recommended for inclusion in the PCMH CAHPS because of their salience for the PCMH: one item addressed after hours care and the second addressed days to urgent appointments. Items related to e-mail access had low performance in this field test primarily due to the small number of respondents who said they had sought advice by email. The team recommended the 3-item composite from the CAHPS Health IT survey be considered as a supplemental set of items where access to and use of e-mail for advice is more prevalent.

Information
Three items relevant to the practice's efforts to provide information to patients were recommended. These items originally grouped with other conceptual domains but did not group well with those original domains; nor do they make up a cohesive composite. Still the content is particularly germane to the PCMH and these items performed well in the field test.

Communication
The C&G CAHPS core survey includes 5 items on communication in the adult survey and 8 items in the child survey. We tested a number of different items related to communication; all of these were strongly correlated with the existing core items. The reliability of the core items in this field test is much lower than the CAHPS Consortium has observed in other settings; the field test of the Clinician & Group Survey showed a reliability of 0.71, compared to 0.62 in this report. New items developed to address "whole person orientation" correlated strongly with the communication items. Because of the high correlation among the communication and whole person orientation items, the CAHPS Consortium recommended keeping the original core and adding an additional item addressing the whole person aspect.

Care Coordination
The C&G CAHPS core includes one item in the care coordination domain – follow up of testing. Of the additional items tested, the team recommends including an item on specialty care and another on medication use. The item on specialty care did not perform well in this field test; cognitive interviews showed that respondents were confused about the referent. This item performs well in other settings (e.g., MHQP and health plan CAHPS). The CAHPS Consortium will explore ways to alter the instructions or placements to improve performance but recommends keeping this item at this time.

We explored whether these items form a composite. The team recommends including these as individual items.

Comprehensiveness
The field test included items that captured several aspects related to comprehensiveness. The CAHPS Consortium recommends a series related to behavioral health needs for adults and a series from the existing pediatric C&G CAHPS for children. The 3-item behavioral health composite has good reliability and internal consistency and addresses an important but often overlooked domain of care. For children items related to development and prevention performed better than the behavioral health domains. A new item related to screen time works well with the existing content.

Self-Management Support
In factor analyses, items related to self-management support presented the strongest factor after communication/whole person orientation. In designing the field test, we developed items to address self-management support for general health needs as well as for chronic conditions. In the field test, all respondents completed these items although an explicit goal of the study was to determine whether some items would work better with a targeted sample of patients with chronic conditions.

We tested different approaches to identifying patients with chronic conditions; practices provided data on patients' diagnoses from billing records, and the survey asked patients to report on whether they had ever been told they had a chronic condition (using a list of conditions from the Medical Expenditure Panel Survey frequently used to assess presence of chronic conditions) and included "the presence of a chronic condition" screener question developed by the CAHPS

Consortium. The results suggest that the CAHPS C&G approach (get care for a condition or problem that has lasted for at least 3 months or used medicine to treat a condition or problem that has lasted for at least 3 months) and the PCMH approach (specific chronic conditions) are sensitive but not specific to the billing records. This is reasonable because the billing records are from a single provider and may not represent care provided in other settings; in addition, identification strategies that rely on diagnoses have been know to miss patients who should qualify as having chronic conditions because of coding errors, misdiagnoses and lack of access to care. . About three-quarters of adults self-identified in the survey as having a chronic condition using CAHPS screener; only 7% of children were identified as having a chronic condition based on parent report using CAHPS screener questions.

We compared performance on self-management support items for patients with and without a chronic condition (based on the CAHPS chronic conditions screener). For the adult survey, the self-management support items performed better with patients with self-reported chronic conditions, and some items seem particularly less suited to a non-chronic condition population. One option would be to keep five items related to self-management support (70, 72, 73, 74, and 76; this composite had a reliability of 0.87 and alpha=0.86) but this would require adding some screener items and limiting the analysis of the composite to people with chronic conditions. A second option, which the CAHPS Consortium recommends, is making slight changes in the wording of items 70 and 71 and using these items for all respondents. The revised items would be:

- Work with you to set specific goals for your health
- Ask you if there are things that make it hard for you to take care of your health.

Shared Decision-Making
The field test includes a set of three items about decision-making on two different kinds of decisions: stopping or starting a medication and having a surgery or procedure. Just under half of adult respondents answered the series of questions about medications; about one quarter of respondents answered the questions about surgery or procedure. Neither set of items met the reliability standard of 0.70. However, because this topic is of critical importance to consumers, the CAHPS Consortium recommended including this series in the PCMH CAHPS.

Because of the large number of items for prevention and development for children, and the small proportion of children who identify with chronic conditions, the CAHPS Consortium recommends using the self-management support composite for adults only.

Office Staff
While this domain was not prioritized by our advisory groups, this composite was included in the field test as part of the CAHPS C&G core. The composite has good reliability.

Reliability
Table 4 summarizes the reliability of the composites and items by domain for the adult and child surveys. Based on these data we will ask your advice on the number of completed surveys that should be required for each participating practice.

Table 1. Results of Public Comment on Survey Topics for Evaluating Practices that Seek Medical Home Qualification (n=1840)

Topic Area	Number of Respondents	
	High Priority	Low Priority
Listens and answers your questions	1,185	53
Involves you in decisions about your care	1,037	92
Explains care to you	802	83
Is aware of care you get from other doctors or places	680	248
Follows up on your test results	639	119
Helps you manage your health	638	248
Seeing the same doctor or nurse	541	573
Getting routine care	539	409
Respects you as a person	474	196
Is aware of your medications	471	145
Knows you well	365	448
Access to help without making a visit	302	791
Getting all of your primary care at one location	291	928
Access to your medical records	265	623
Wait time	259	881
Getting care after hours	249	908
Has confidence in your ability to manage your health	249	540
Office staff	128	914
Asks you about the quality of care	86	1,001

Table 2. Field Test Response Rates

Survey Type	# of Practices	Outgoing Sample (a)	Returned as Undeliver -able (b)	Identified as Ineligible (Deceased, Disabled, or Language Barrier) (c)	Requested Removal	Returned (d)	Raw Response Rate (d/a)	Adjusted Response Rate* (d/(a-b-c))
Adult	10	7,335	335	0	6	1,781	24.3%	25.4%
Child	10	7,069	438	1	4	1,461	20.7%	22.0%
Child PPOC	23	5,669	72	0	4	1,633	28.8%	29.2%
Total	**43**	20,073	845	1	14	4,875	24.60%	25.53%

Table 3. Comparison of the Domains and Number Items in the CAHPS Clinician & Group Core Survey versus the Proposed PCMH Items/Composites

Domain	CAHPS C & G Core Item Count	PCMH Item Count	CAHPS C & G Core with PCMH Item Count
ADULT			
Access	9	3	12
Information	0	3	3
Communication	7	1	8
Coordination of Care	2	4	6
Comprehensiveness: behavioral/whole person	0	3	3
Self Management Support	0	2	2
Shared Decision Making	0	4	4
Office Staff	2	0	2
Rating	1	0	1
Eligibility	4	0	4
Demographics	12	1	13
Total Item Count	***37***	***21***	***58***
CHILD			
Access	9	3	12
Information	0	3	3
Communication	14	0	14
Coordination of Care	2	4	6
Comprehensiveness: pediatric development	5	0	5
Comprehensiveness: pediatric prevention	5	1	6
Self Management Support	0	2	2
Office Staff	2	0	2
Rating	1	0	1
Eligibility	4	0	4
Demographics	12	0	12
Total Item Count	***54***	***13***	***67***

Table 4. Summary of Reliability Results for the CAHPS Clinician & Group Core Survey versus the Proposed New PCMH Items/Composites

	CAHPS C&G Core		PCMH	
Domain	Reliability	Number needed to achieve reliability of 0.70	Reliability	Number needed to achieve reliability of 0.70
ADULT				
Access	0.87	60	0.89	49
Information (individual items)	--	--	0.75-0.96	13-124
Communication	0.62	239	0.66	205
Coordination of Care (individual items)	0.87	53	0.09-0.71	140-2482
Comprehensiveness: behavioral/whole person	--	--	0.89	48
Self Management Support	--	--	0.83	76
Shared Decision Making	--	--	0.61	127
Office Staff	0.91	40	--	--
CHILD				
Access	0.92	17	0.92	18
Information	--	--	0.75-0.91	19-65
Communication	0.78	60	--	--
Coordination of Care	0.54	61	0.52-0.55	70-89
Comprehensiveness: pediatric development	0.86	33	--	--
Comprehensiveness: pediatric prevention	0.83	41	0.87	31
Self Management Support	--	--	0.69	90
Office Staff	0.91	20	--	--