The Joint Commission Journal on Quality and Patient Safety 2018; 44:12–22

Perspectives on Implementing Quality Improvement Collaboratives Effectively: Qualitative Findings from the CHIPRA Quality Demonstration Grant Program

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Background: The most frequently pursued intervention in the $100 million, 18-state Children's Health Insurance Program Reauthorization Act of 2009 (CHIPRA) quality demonstration (2010–2015) was quality improvement collaboratives, which 12 states offered to more than 300 primary care practices. A study was conducted to identify which aspects of these collaboratives were viewed by organizers and participants as working well and which were not.

Methods: Some 223 interviews were conducted in these states near the end of their collaboratives. Interview notes were coded and analyzed to identify trends.

Results: Aspects of collaboratives that interviewees valued were aimed at *attracting participation*, *maintaining engagement*, or *facilitating learning*. To *attract participants*, interviewees recommended offering maintenance-of-certification credits, aligning content with existing financial incentives, hiring a knowledgeable collaborative organizer of the same medical specialty as participants, and having national experts speak at meetings. Positively viewed approaches for *maintaining engagement* included meeting one-on-one with practices to articulate participation expectations in advance, tying disbursal of stipends to meeting participation expectations, and soliciting feedback and making mid-course adjustments. To *facilitate learning*, interviewees liked learning from other practices, interactive exercises, practical handouts, and meeting face-to-face with new referral partners.

Conclusion: Prior studies have tended to focus on strategies to *maintain engagement*. The interviewees valued these features but also valued aspects of collaboratives that *attracted participants* in the first place and *facilitated learning* after participants were actively engaged. The findings suggest that a wider array of features may be important when developing or evaluating collaboratives. Collaborative organizers may benefit from incorporating the recommended collaborative features into their own collaboratives.

Using collaboratives to improve health care quality was first popularized in the mid-1990s by the Institute for Healthcare Improvement through its Breakthrough Series Collaboratives.[1] These collaboratives bring together teams from different organizations to learn how to improve care delivery using the Plan-Do-Study-Act (PDSA) approach to making incremental changes.[2] Teams typically convene during a 6- to 15-month period for several in-person meetings led by expert faculty, which are supplemented by more frequent conference calls, and submit periodic quality measure data to allow progress to be monitored.[3]

Interest in collaboratives has exploded recently, with the Centers for Medicare & Medicaid Services (CMS) awarding $685 million for clinician-focused collaboratives through its Transforming Clinical Practice Initiative, to name one effort.[4] Many other collaboratives aimed at improving health care quality are under way in the United States and abroad.

Although use of collaboratives has quickly grown, evidence of their effectiveness is limited: Systematic reviews have found only moderate positive results, and studies often use methodologically weak designs;[1,5] they also typically lack detail about collaboratives' specific features, which makes it impossible to tease out which aspects of collaboratives are effective and which are not.[5]

Given the nascent evidence base for collaboratives, researchers have called for a closer look into the "black box" of collaboratives—to identify components that are associated with success or failure, and to understand how and why collaboratives work.[1,6] Authors of systematic reviews have noted that studies that identify which aspects of collaboratives participants find useful and which they do not can offer insights into collaborative components to test in future studies.[5,7]

This article helps fill gaps in this literature by presenting interviewees' perceptions of what worked and what didn't in 12 states' quality improvement (QI) collaboratives, funded through the $100 million Children's Health Insurance Program Reauthorization Act of 2009 (CHIPRA) quality demonstration.[8] States that were awarded CHIPRA quality demonstration grants could pursue activities in up to five categories (see Sidebar 1); given this wide latitude, it was noteworthy that the most frequently pursued intervention was QI collaboratives for primary care practices, which 12 states offered to more than 300 child-serving practices between 2010 and 2015 (Figure 1). States' collaboratives typically focused

1553-7250/$-see front matter
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https://doi.org/10.1016/j.jcjq.2017.08.004

Sidebar 1. The CHIPRA Quality Demonstration's Quality Improvement Collaboratives

States that were awarded CHIPRA quality demonstration grants[1] could pursue activities in up to five categories: (a) experimenting with and evaluating new quality measures, such as CMS's Child Core Set[2]; (b) promoting the use of health information technology; (c) evaluating newer provider-based models; (d) assessing HHS's child-focused electronic health record (EHR) format; and/or (e) pursuing other state-proposed efforts. Given the wide latitude in the types of activities that states could pursue, it was noteworthy that the most frequently pursued intervention was quality improvement (QI) collaboratives for primary care practices, which 12 states offered to more than 300 child-serving practices between 2010 and 2015 (Figure 1).

The CHIPRA collaboratives often encouraged practices to engage in more systematic screening or delivery of particular services, to more closely manage patients with particular conditions, or to adopt the patient-centered medical home (PCMH) model of care—often with an emphasis on care coordination and patient engagement (Table 1). All collaboratives taught practices to use the PDSA approach to make incremental changes to practice work flows, and many taught practices to calculate small-denominator, chart-based quality measures to monitor their progress over time.

Most of the states' collaboratives convened multidisciplinary practice teams a few times per year for daylong meetings, supplemented by monthly conference calls or webinars and periodic visits from a practice facilitator or coach (Table 2). Clinicians could often earn maintenance of certification or continuing medical education credits for collaborative participation. Some states tried to maximize the number of practices they reached and/or topics they covered by offering a few rounds of shorter collaboratives that each lasted 6 to 18 months (FL, ID, ME); others worked with a consistent cohort of practices over a longer period of 2 to 4 years (AK, MA, NC, OR, SC, UT, WV). Unlike IHI–style collaboratives, most CHIPRA collaboratives were offered for free, and five states (AK, MA, NC, OR, SC) paid practices stipends (for example, $18,000 per practice per year in South Carolina). In some states (NC, OR, SC), practices could also receive additional payments through other initiatives after they met state-specified PCMH recognition criteria. Three states (ID, UT, WV) funded the salaries of new care coordinators embedded in practices. Meanwhile, two states (ID, UT) charged practices fees of a few hundred dollars to participate in their collaboratives.

Nine states (AK, FL, IL, MA, ME, OR, SC, UT, WV) asked practices to measure their performance at multiple points in their collaboratives, and all of these states reported gains on their chosen measures. Eight of these states (AK, FL, IL, MA, OR, SC, UT, WV) measured practices' reported mastery of the PCMH model of care, and two (MA, ME) tracked gains on numerous clinical process measures, typically reported using small samples of patient charts. Maine also measured practice-level screening rates using claims data and statewide immunization registry data.

References

1. Children's Health Insurance Program Reauthorization Act of 2009, Pub. L. No. 111-3, 123 Stat. 8, Feb. 4, 2009.
2. US Department of Health and Human Services, Office of the Secretary. Medicaid and CHIP Programs; Initial Core Set of Children's Healthcare Quality Measures for Voluntary Use by Medicaid and CHIP Programs. Fed Regist. 2009 Dec 29;74(248):68846–68849.

CHIPRA, Children's Health Insurance Program Reauthorization Act of 2009; CMS, Centers for Medicare & Medicaid Services; HHS, US Department of Health and Human Services; PDSA, Plan-Do-Study-Act; IHI, Institute for Healthcare Improvement.

on helping practices adopt aspects of the patient-centered medical home (PCMH) model of care and/or improve their performance on quality measures, which practices often hoped might lead to enhanced payment opportunities in the future. Participating practices usually specialized in pediatrics or family medicine and included private practices, federally qualified health centers, and ambulatory clinics within academic medical centers. They varied in size, ownership, and geographic setting and tended to serve a large percentage of Medicaid/CHIP–insured patients.

This article updates an earlier article,[9] which described initial features and early implementation experiences of nine states' CHIPRA collaboratives as of 2012. The current article provides updated information on CHIPRA collaboratives' features and presents findings from interviews conducted in 2014, near the end of states' collaboratives, to identify what was perceived as working well and what was not. This article is also an expansion of an issue brief[10] that described a subset of our 2014 interview findings for only nine states; it includes more interview findings for more states and introduces a conceptual grouping of our findings (Figure 2), which helped us to identify an important difference between our findings and the prior literature (see Discussion).

METHODS

Interviewees

Our multiple-case study draws on 223 interviews conducted from March to July of 2014 with individuals involved in the 12 CHIPRA demonstration states' collaboratives. Interviews were conducted with 43 key state Medicaid staff and/or contractors who designed and/or oversaw implementation of CHIPRA collaboratives; 52 other staff and/or contractors implementing the collaboratives; 99 practice staff members (for example, physicians, nurses, office managers) from a purposive sample of practices that varied in their practice type, size, and geographic setting; and 29 non-Medicaid stakeholders who advised states on collaboratives, who were selected by our evaluation team [including the authors] to maximize the breadth of topics and constituents represented, and drawn from lists of stakeholders provided by states.

Interviewers

The interviewers were seasoned qualitative researchers at the Urban Institute [including the authors] and Mathematica Policy Research, who prepared for interviews by reviewing

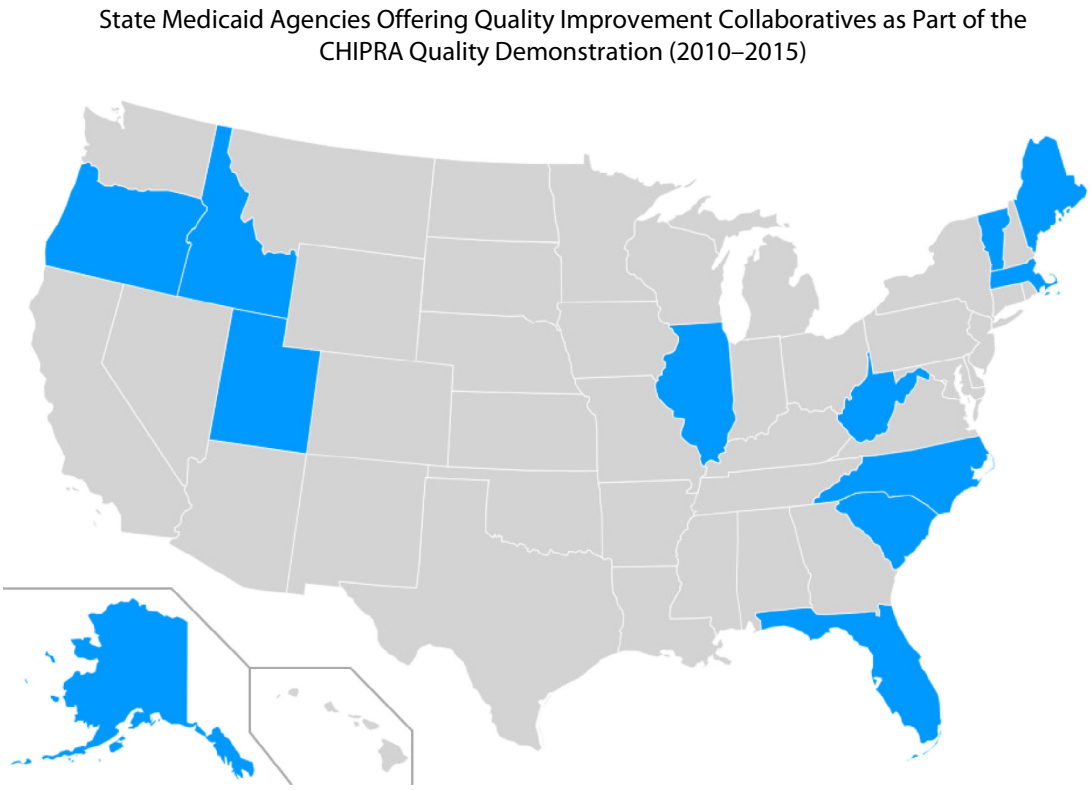

Figure 1: The Children's Health Insurance Program Reauthorization Act of 2009 (CHIPRA) quality demonstration states that offered quality improvement collaboratives to primary care practices were Alaska, Florida, Idaho, Illinois, Maine, Massachusetts, North Carolina, Oregon, South Carolina, Utah, Vermont, and West Virginia.

states' semiannual progress reports, interview notes from earlier interviews conducted in 2012, and logic models that our team developed that summarized each collaborative's contextual information and available resources, strategies, and intended outputs and outcomes.

Interviewers used a semistructured interview guide to identify implementation experiences, which included open-ended questions about "what worked well" and "what worked less well or needed to be changed" in a state's collaborative (Sidebar 2). Interviewees were informed in writing and orally that the purpose of our voluntary, confidential interviews was to conduct a federal evaluation of the CHIPRA quality demonstration. Interviews were primarily conducted in person in a private room at interviewees' workplaces, or by phone. Interviews with practice staff and external stakeholders typically lasted 30–45 minutes, and interviews with individuals implementing a state's demonstration activities typically lasted 60–90 minutes. Data collection was approved by the Institutional Review Boards of the Urban Institute and Mathematica Policy Research and by the White House's Office of Management and Budget.

Data Analysis

Interviews were audio-recorded and transcribed—and were then coded by a team of research assistants using qualitative data analysis software (NVivo 10; QSR International [Americas] Inc., Burlington, Massachusetts). We developed our code list after conducting interviews with the full range of interviewees in multiple states. We included primarily inductive[11,12] codes, which identified, for example, the type of demonstration activities discussed in interviews and the different types of participant views. To maximize intercoder reliability, an author [R.A.B.] trained coders, assigned them sample interviews to code, reviewed NVivo-calculated kappa coefficients for all coders to ensure consistency between their coding and hers, and refined our code list to reduce coding variation and to ensure that all interview passages were captured with a suitable code. After three such rounds, the coders had achieved a sufficiently high degree of coding consistency, and all interview notes were then coded. Queries were then run to extract passages double-coded with our "collaborative" code and our "positive," "negative," or "lesson learned" code. The coding trainer [R.A.B.] reviewed this query output to identify aspects of collaboratives mentioned in multiple states and to identify whether there was agreement or disagreement on each of these topics; the states in which a particular view was expressed are noted in this article in parentheses. Another one of us [R.A.P.] independently reviewed the query output and commented on the draft findings; any questions that she raised were investigated through ad hoc text-based NVivo queries and resolved. The senior coauthor [K.J.D.]

Table 1. Topics Taught in 12 States' Quality Improvement Collaboratives (as of 2015)

Topics		AK	FL	ID	IL*	IL†	ME	MA	NC	OR	SC	UT	VT	WV
Quality Improvement	Data Measurement and Reporting / HIT‡	✓	✓			✓	✓	✓	✓		✓	✓		✓
	PDSA	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓
Clinical Topics	ADHD			✓							✓	✓		
	Asthma			✓		✓					✓	✓		
	Immunizations	✓		✓	✓		✓							✓
	Obesity/BMI	✓		✓	✓		✓		✓		✓	✓		✓
	Oral Health	✓			✓		✓		✓		✓	✓		
	Other Clinical Topics§	✓		✓	✓		✓		✓	✓	✓	✓	✓	✓
PCMH Principles / Certification‖		✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓
Care Coordination#		✓	✓	✓				✓						✓
Family and Patient Engagement**		✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓
Other††		✓		✓	✓		✓	✓	✓	✓	✓	✓		✓

Sources: Semiannual progress reports submitted by states to the US Centers for Medicare & Medicaid Services from 2010 to 2015; 2014 interview notes.

*The first of two CHIPRA–funded collaboratives in Illinois was led by the Illinois Chapter of the American Academy of Pediatrics (ICAAP).

†The second of two CHIPRA–funded collaboratives in Illinois was led by Health Management Associates (HMA).

‡The "Data Measurement and Reporting / HIT" category includes activities related to collection and analysis of quality measure data. It also includes activities related to using HIT to collect and calculate quality measures.

§The "Other Clinical Topics" category includes conditions such as: pharyngitis, upper respiratory infections, otitis media, and sinusitis. It also includes screening patients for developmental delays, autism spectrum disorder conditions, lead poisoning, anemia, and adolescent depression.

‖The "PCMH Principles / Certification" category includes content related to the patient-centered medical home (PCMH) model of primary care (for example, as articulated by the Medical Home Index survey), and NCQA's PCMH practice recognition criteria.

#The "Care Coordination" category includes training for care coordinators, training for practices seeking to hire a care coordinator, identifying potential community resources to refer patients to, managing care transitions, tracking referrals, and identifying children and youth with special health care needs. It also includes content related to care plans.

**The "Family and Patient Engagement" category includes helping practices recruit parent advisors, and patient/family education through new handouts. It also includes activities related to soliciting patient and family feedback, including using AHRQ's CG-CAHPS Survey.

††The "Other" category represents the collaborative topics that were not represented elsewhere in the table: sustainability and spread, the collaborative model, and strategies to engage practice leadership.

HIT, health information technology; PDSA, Plan-Do-Study-Act; ADHD, attention deficit hyperactivity disorder; BMI, body mass index; CHIPRA, Children's Health Insurance Program Reauthorization Act of 2009; NCQA, National Committee for Quality Assurance; AHRQ, Agency for Healthcare Research and Quality; CG-CAHPS, Clinician and Group Consumer Assessment of Healthcare Providers and Systems.

led the qualitative data collection and analysis for this evaluation, provided input on the code list, and provided critical guidance and feedback throughout the development of this article.

Individuals leading each of the 12 states' CHIPRA activities were invited to review and comment on a draft version of this article. Feedback was also obtained from fellow researchers working on the evaluation of this demonstration and from the project officer overseeing this evaluation.

RESULTS

In analyzing our findings, we found that the collaborative features that interviewees commented on fell into three categories, which were aimed at (1) *attracting participation*; (2) *maintaining engagement* after practices had joined a collaborative; or (3) *facilitating learning* after practices had joined a collaborative and were actively engaged. Conceptually, these three categories are best thought of as three slightly overlapping circles (because some features could logically appear in more than one category), arrayed in the chronological order that they would be experienced by participants (Figure 2). Our findings are described below and summarized in Sidebar 3.

Attracting Participation

Collaborative features used to attract participants typically included economic incentives, such as offering a valued service for free, paying practices to participate, or teaching practices skills that could generate enhanced revenues for them in the future.

Interviewees (ID, IL, ME, NC, OR, SC, UT, VT) widely praised offering maintenance of certification (MOC) or continuing medical education (CME) credits—which provided "a big hook to bring in physicians," as one Idaho organizer put it, because physicians are required to earn (and, usually, pay for) such credits at regular intervals. "Docs are very pleased that they can get MOC credits *and* do things to become a medical home," said one Idaho practice staff member.

Table 2. Structural Details of 12 States' Quality Improvement Collaboratives (as of 2015)

State	AK	FL	ID	IL*	IL†	ME	MA	NC	OR	SC	UT	VT	WV
Organization leading collaborative‡	S	C	S	C	C	C	C	C	C	S	C	S	S
No. of practices participating	3	14–20 x 2 rounds	10–17 x 3 rounds	15	15	12–34 x 4 rounds	13	26	8	18	12	11	10
Duration (months)	36	18	9–12	18	10	6–9	29	24	36	48	42§	9	36
No. of in-person meetings (per year)	1	2	3–4	3	3	2–3	2–3	2–3	2	2	2	3	1
Monthly webinars or conference calls	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
In-person practice facilitation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PDSA homework	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓
Parent advisors		✓	✓	✓	✓	✓	✓		✓	✓	✓		✓
Practice-reported quality measure data	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓		✓
MOC or CME credits offered		✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
Funding for care coordinators			✓								✓		✓
Stipends per practice per year	$✓‖						$13,800#	$2,500**††	$7,000††	$18,000††			
Fees charged per physician			$200								$295		

Sources: Semiannual progress reports submitted by states to the US Centers for Medicare & Medicaid Services from 2010 to 2015; 2014 interview notes.

*The first of two CHIPRA–funded collaboratives in Illinois was led by the Illinois Chapter of the American Academy of Pediatrics (ICAAP).

†The second of two CHIPRA–funded collaboratives in Illinois was led by Health Management Associates (HMA).

‡S = State Medicaid agency, C = Contracted organization.

§Utah's collaborative consisted of a 3.5-year project subdivided into four sequential 9-month collaboratives. The 12 participating practices took part in each of the four collaboratives.

‖Alaska issued large grants to participating practices to support participation in the state's quality improvement collaborative and other activities.

#Massachusetts practices were required to use some of these funds to pay stipends of $75 per month to the 1–2 "parent partners" they were encouraged to recruit.

**Practices in North Carolina received an incentive payment of $1,000 if they attended 60% of their collaborative's webinars, and $2,500 if they attended 80% of their collaborative's webinars. They were also eligible to receive one-time bonuses of $2,500 each for achieving Level 2 and then Level 3 PCMH recognition from NCQA.

††Practices in North Carolina, Oregon, and South Carolina who met certain PCMH practice recognition criteria could also qualify for additional payments through non-CHIPRA initiatives.

PDSA, Plan-Do-Study-Act; MOC, Maintenance of Certification; CME, continuing medical education; CHIPRA, Children's Health Insurance Program Reauthorization Act of 2009; PCMH, patiented-centered medical home; NCQA, National Committee for Quality Assurance.

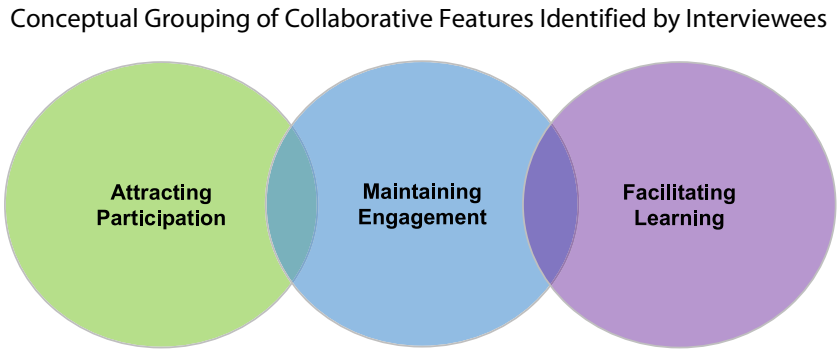

Figure 2: The aspects of quality improvement collaboratives that interviewees commented on fell into three categories, which are shown as overlapping circles because some aspects of collaboratives could logically fall into more than one category. They are arrayed from left to right in the chronological order in which they would be experienced by a collaborative participant.

Stipends were viewed as helping to attract participation, but they sometimes did not reach their intended recipient. A collaborative organizer in Oregon thought the stipends they offered to practices made "a big difference" in their ability to attract participants, by offsetting lost revenues experienced by practices when diverting staff time from seeing patients to attending collaborative events and working on homework assignments. However, an organizer in South Carolina thought it "may have been more trouble than it was worth" because funds were sometimes paid to a health system that owned a practice, and not received by the participating practice. In contrast, Utah and Idaho actually charged practices to participate in their MOC–eligible collaboratives, which made practices "less likely to pull out," according to an Idaho organizer, because physicians wanted to maximize what they could learn in exchange for their $200 fee.

Organizers in some states (IL, OR) found that practices were more inclined to improve delivery of a particular service when they had a financial incentive to do so—such as a preexisting Medicaid pay-for-performance measure tied to execution of that service (IL). The corollary was also true—Maine organizers recommended making sure that any service to be recommended was billable through Medicaid, or to see if a new billing code could be authorized, because providers were less likely to engage in unbillable services.

Interviewees in several states (IL, ME, OR, SC, WV) thought it was important for the collaborative organizer to be perceived as respected, neutral, and "one of their own," as a Maine organizer put it—meaning an expert physician or physician organization, and ideally one with the same medical specialty as most participants (for example, pediatrics).

Similarly, interviewees across many states (FL, ID, ME, NC, OR, UT, WV) thought it was important for presenters to have expertise and experience in a particular topic—for example, to secure the physician who wrote the American Academy of Pediatrics guidelines for treating a particular condition. Though the least overtly financial of the features aimed at attracting participation, respected collaborative organizers and expert faculty can convey to practice staff that their valuable time will be well spent participating in a collaborative.

Maintaining Engagement

After practices had joined a collaborative, organizers used a variety of approaches to maintain engagement. These approaches were generally aimed at getting practices' attention and holding their interest.

Collaborative organizers in several three states (IL, ME, SC) recommended narrowing collaboratives' focus to a single clinical topic (for example, asthma, as opposed to all of the measures in CMS's Child Core Set) because covering too many topics at a high level can overwhelm participants and make it unclear what specific changes they should make to their practice.

Interviewees in five states (ID, IL, MA, ME, SC) emphasized the importance of having a strong physician champion on each practice's collaborative team, to convince other providers in the practice to adopt new ways of delivering care and to motivate practice staff to stay engaged in the collaborative. Interviewees (ID, IL, NC, OR, SC) also emphasized the importance of including additional types of practice staff on these teams, including nurses and administrative staff. As a South Carolina collaborative organizer explained, different team members help identify how to implement different aspects of a new policy: not only which patients to give a new screening questionnaire to, but where to insert this questionnaire in the visit work flow, how to reflect the screening results in a practice's electronic health record (EHR), and how to bill for it. An Oregon provider recommended that practices "always make sure you involve somebody from every department on the team because everything you do has an impact on some other department."

Sidebar 2. Interview Guides Description

Separate interview guides were developed for different types of interviewees, to reflect the different topics that different interviewee types would be able to comment on, and the different ways questions would need to be phrased depending on an individual's role in a state's Children's Health Insurance Program Reauthorization Act of 2009 (CHIPRA) quality demonstration.[1] Interviewee types were as follows:

1. Key staff (that is, the state Medicaid staff and/or contractor[s] leading the design and overseeing the implementation of CHIPRA quality demonstration activities)
2. Other implementation staff (for example, state staff and/or contractors implementing CHIPRA quality demonstration activities)
3. Medicaid managed care organization / private health insurance company executives who were aware of the state's CHIPRA quality demonstration activities
4. External stakeholders (for example, staff of other state agencies or nonprofit organizations who sat on a committee advising state Medicaid staff on the design and implementation of their CHIPRA quality demonstration activities)
5. Health care organization staff (staff of primary care practices participating in a state's demonstration activities, including physicians, nurses, and office managers).

CHIPRA quality demonstration states could pursue activities in up to five categories of interventions, as follows:

a. Experimenting with and evaluating new quality measures, such as the CMS Child Core Set[2]
b. Promoting the use of health information technology
c. Evaluating newer provider-based models
d. Assessing HHS's child-focused electronic health record (EHR) format[3]
e. Pursuing other state-proposed efforts

Accordingly, the interview guides included sections containing interview questions about each of the five categories. The questions that were actually asked in a given state reflected the categories of activities that were being implemented in that state, so there were entire sections of interview guides that would not have been applicable in certain states and therefore those questions would not have been asked. Similarly, if researchers on our team were interviewing someone who had knowledge of only one particular category of activities under way in a state, the interviewer would have asked the interviewee only about that one category of activities.

In the interview guides, yellow highlighting was used to identify high-priority questions that our interviewers were instructed to ask before moving on to other questions.

Quality improvement collaboratives would have been discussed in response to questions in the "provider-based models (Category c)" section of our interview guides, and our "cross-category" section, which included more general questions that would have been germane in any state. The interview guide questions that would have generated the bulk of the interviewee responses used in this study are as follows:

- What [quality improvement collaborative] strategies seem to have worked well? What factors seem to be contributing to progress?
- What [quality improvement collaborative] strategies seem to have worked less well? What factors seem to be inhibiting progress? How did you work to overcome the challenges you've described?

Collaboratives were also discussed in response to other questions in the interview guides because collaboratives were the main activity being implemented in most of the states. Examples of other questions that would have elicited remarks about collaboratives include the following:

- Please briefly describe the major strategies or approaches you have used to meet the state's objectives or milestones in this area for the last year.
  - How has your approach evolved over time?
- What are your major accomplishments in this area?
- How are providers responding to the demonstration?
  - What changes are they making to how they deliver care?
- How are patients and families responding to the demonstration?
- What are your plans for sustaining the CHIPRA activities after the grant period ends?
  - What will help you sustain your efforts?
  - What activities will be difficult to sustain? Why?
- What lessons have you learned or what insights and advice might you have for other states trying to implement similar quality improvement projects?

To prepare for interviews, interviewers reviewed lengthy semiannual progress reports written by state demonstration staff. These progress reports helped interviewers understand basic logistical details of the state's collaboratives, and recent activities and experiences. Progress reports required state staff to provide narrative descriptions and discussions of the following topics:

- Provide a brief description of the progress you have made toward the implementation of the grant project.
- Summary Table of Activities Performed over the Past Six Months with Grant Funding
- Key Lessons Learned & Our *Ah-ha!* Moments from This Period of Performance
- Looking to the Future: Provide a one-to-two paragraph description of what you hope to report on in terms of progress in the next semiannual report.

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CMS, Centers for Medicare & Medicaid Services; HHS, US Department of Health and Human Services.

Sidebar 3. Recommended Approaches for Quality Improvement Collaboratives

To Attract Participation . . .

- Offer maintenance of certification or continuing medical education credits in exchange for participation.
- Align collaborative content with external financial incentives (for example, pay-for-performance measures).
- Hire a collaborative organizer who is respected, neutral, and the same medical specialty as participants (for example, a pediatrician, if participants are mostly pediatricians).
- Have national experts give presentations at collaborative meetings.

To Maintain Engagement . . .

- Limit the focus of the collaborative to a narrow topic (for example, one clinical condition).
- Require practice teams to include a physician champion, a nurse, and administrative staff.
- Meet one-on-one with each practice before the collaborative starts to articulate participation and data collection expectations.
- Limit the duration of in-person meetings to 4–6 hours, and offer frequent 15-min. breaks and dedicated "team time"—so practices can develop plans to implement changes learned about during meetings.
- Minimize the use of conference calls and webinars, except in rural areas (where practices view these more favorably because they dislike traveling long distances for in-person meetings).
- If stipends are used, tie disbursal to participation requirements.
- Instead of websites that require passwords (which are hard to remember), use group e-mails.
- Have practice facilitators work one-on-one with practices on an ongoing basis to answer questions.
- Require practices to regularly complete PDSA exercises as homework.
- Distribute quality measure reports showing how participating practices compare to each other to stoke friendly competition.
- Frequently solicit attendee feedback (such as through satisfaction surveys), and make mid-course adjustments that reflect attendee needs and preferences.

To Facilitate Learning . . .

- Facilitate peer-to-peer learning between practices, both in-person and virtually, such as by having practices present to one another at meetings, and setting up communities-of-practice for care coordinators to share tips.
- Maximize the use of interactive approaches for delivering content (for example, forum theater exercises, live demonstrations) over lectures.
- If encouraging practices to screen and refer patients to new types of services, introduce attendees to specific providers and representatives of organizations to whom they can refer patients.
- Distribute practical handouts that can be used immediately, such as clinical guidelines, recommended patient screening questionnaires, and Medicaid billing codes.

Source: Authors' analysis of interview data summarized in this paper.
PDSA, Plan-Do-Study-Act.

Interviewees in five states (FL, IL, ME, NC, OR) mentioned the importance of having collaborative staff sit down one-on-one with practices before the collaborative began to articulate participation and data collection expectations. Such discussions helped practices "get engaged and know what they're signing up for" while also acquainting practice facilitators with "the hurdles they'll be facing at each practice," as one Idaho organizer put it. Some states learned that not setting specific expectations led to poor practice engagement (IL, NC), and they ended up adding such pre-collaborative discussions in subsequent rounds of their collaboratives.

Interviewees sometimes (IL, FL, OR, UT) commented on practice fatigue from daylong collaborative meetings. To avoid this, interviewees suggested 15-minute breaks between presentations (FL) and shortening meetings to 4 or 6 hours (ID, IL, OR, UT). Practices in some states (ME, OR, UT) said they appreciated having dedicated time during meetings to talk about how to implement presented strategies, while information was fresh in their heads. A Utah practice staff member explained: "We need time after each [session] to discuss as a team. We end up whispering back and forth while the next presenter comes up." Staff in several practices (OR, UT) told us this "team time" was the most helpful part of in-person meetings.

Conference calls or webinars were consistently viewed as less engaging than in-person meetings; participants were less forthcoming and interacted less with each other (AK, FL, IL, ME, NC, OR, SC, UT, VT). As a collaborative organizer in South Carolina put it: "You get really poor attendance, people are distracted, they come on late and leave early—the office is a busy place." Yet some states (NC, OR, SC) had success in generating practice engagement by tying receipt of stipends to participation requirements—such as attendance on conference calls or completion of PDSA homework. A collaborative organizer in North Carolina found that when they instituted this requirement, attendance rates on monthly webinars skyrocketed, and "we couldn't get a word in—[practice staff] were asking questions to each other." Meanwhile, interviewees (ID, IL, ME, NC, VT, WV) often

said conference calls and webinars were viewed more favorably by staff in rural practices, who did not like traveling long distances for in-person meetings.

Collaborative organizers in several states also commented on the difficulty of using password-protected websites to convey and collect information (FL, MA, SC, VT); listserves or group e-mails were preferred.

Interviewees often commented on their appreciation for practice facilitators (AK, ID, IL, ME, NC, OR, SC), who worked with practices one-on-one to answer questions and give advice and "hammer out details," as a Utah care coordinator put it. Oregon's practice facilitators, who were viewed very positively, worked with practices on a monthly basis to help translate the state's PCMH practice recognition standards into specific changes practices could make. Facilitators also provided an accountability structure, because "when someone is going to come in and meet you, you prep for it, and you want to put your best foot forward," as one Oregon organizer put it. In most states, facilitators had nursing degrees or a master's degree in public health; in South Carolina and Vermont a leading pediatrician served as a facilitator (and brought along mental health and QI specialists, in South Carolina).

In a similar vein, interviewees in some states singled out PDSA exercises as being particularly useful and believed that such exercises helped hold practices accountable for continuing to make progress throughout the collaborative period (IL, MA, ME, NC, SC, OR, UT).

Interviewees in several states (IL, ME, NC, SC) thought that showing practices how they compared to their collaborative peers on selected quality measures helped promote healthy competition.

Collaborative organizers in seven states (AK, ID, MA, ME, NC, OR, UT) recommended regularly soliciting feedback from practices, such as through satisfaction surveys, and making mid-course adjustments. According to an Oregon organizer, "if you really want to engage the providers, make sure you ask them what's important to them." Examples of changes made based on practice input include restructuring meetings to reduce lectures and add more interactive sessions (ME) and adding more facilitated "team time" and opportunities for practice interaction (MA).

Facilitating Learning

After participants were engaged in the collaborative, a third set of features were identified by interviewees as facilitating learning.

Far and away, the aspect of collaboratives that practices most frequently praised (in all 12 states) was learning from other practices, which typically occurred during in-person meetings, but sometimes also through practice-to-practice phone calls to troubleshoot issues or site visits to observe how another practice did something (OR, SC, UT). Hearing what other practices were doing motivated and invigorated practices and made change seem less daunting, according to an Oregon practice staff member. A South Carolina collaborative organizer said it was helpful hearing from a physician who had tried something that other practices were nervous about doing because he dispelled myths, explained how he had addressed barriers, and talked about the benefits he saw: "He took fears off the table." Meanwhile, a Utah care coordinator told us: "It's really much more helpful to talk to someone who's been doing it. It's nice to hear about [how] somebody conceptualizes something, but if it hasn't been put into practice, I find it less useful." Some practices (AK, OR, SC, UT) also mentioned that they liked hearing about things that did *not* work well, so practices could avoid repeating others' mistakes.

Just as practices liked learning from other practices, individuals liked learning from other individuals who held similar roles in other practices. Several states organized monthly conference calls to allow practice facilitators (MA, NC) or care coordinators (UT, VT, WV) to trade notes. A Massachusetts organizer told us they developed "communities of practice," splitting up practice teams to allow physicians to meet with other physicians, parent advisors to meet with other parent advisors, and so on.

Practices in a few states said they preferred interactive exercises to lectures (MA, ME, UT). As one Utah provider put it: "I believe in learning by doing." One of the ways Utah organizers made their meetings interactive was through "forum theater" exercises, in which actors acted out different patient visit scenarios, then asked practice staff in the audience for suggestions of ways to improve the interaction, which they then used to redo the scene.

Several states encouraged practices to strengthen referral relationships with dentists and mental health professionals. In Maine physicians participated in breakfasts with local pediatric dentists that were aimed at developing face-to-face relationships to increase rates of referrals and referral follow-up. Similarly, South Carolina arranged for one-on-one meetings with local mental health providers to clarify which types of cases should be referred to them. And Utah care coordinators often mentioned how helpful they found their state's "speed resourcing"; as one of them put it: "In two minutes, [local community organizations] cram in as much as they can. Realistically, that's all I can take home anyway. I love that, and our doctors love that too."

Interviewees reported that practices appreciated receiving practical handouts (AK, IL, NC, SC, UT)—such as copies of national clinical guidelines, patient screening questionnaires, Medicaid billing codes for recommended services, or sample patient registry database files—that could be immediately used.

Almost all states encouraged practices to recruit parent advisors, who were viewed as an asset by some practices in some states (FL, MA, OR) and as hard to recruit, retain, and engage—even when parent stipends were offered—by other practices (FL, MA, ME, UT, VT). To demonstrate the type of feedback parents could give, Oregon collaborative organizers

had parents give presentations at collaborative meetings, which they told us received practices' highest ratings in meeting evaluations. An interviewee from one practice in that state, in turn, told us about useful feedback they obtained through a focus group they conducted with Spanish-speaking parents: The parents identified information to prioritize for inclusion in a new Shared Care Plan template and noted that if care plans were produced in both Spanish and English, parents would be better able to explain their children's diagnoses to other English-speaking providers.

DISCUSSION

This study peers into the "black box" of collaboratives to identify interviewees' views on various collaborative features. Some of our findings are new, and fall into all three of our categories. Specifically, to *attract participants,* our interviewees recommended offering MOC or CME credits, aligning content with external financial incentives (for example, pay-for-performance measures), and contracting with respected collaborative organizers of the same medical specialty as most participants. They also believed that stipends could help attract participation but cautioned that they sometimes did not reach intended recipients. New findings related to *maintaining engagement* include interviewees' recommendations to limit the scope of collaboratives and to meet with practices one-on-one before a collaborative began to articulate participation and data collection expectations. They also recommended limiting the duration of in-person group meetings to 4–6 hours, offering 15-minute breaks between sessions, and soliciting feedback and making mid-course adjustments to ensure that collaboratives were meeting participants' needs. Interviewees discouraged using password-protected websites. To *facilitate learning*, practice staff liked interactive exercises and demonstrations, meeting with potential referral partners, and practical handouts. They found that parent advisors offered useful feedback when practices were able to recruit and retain them.

Other findings from our study are supported by the existing literature. Specifically, prior studies have found that respondents favor involving multidisciplinary teams from practices,[6,12,13] learning from experts,[6,14–17] carving out team time at in-person meetings to identify and discuss possible practice changes,[15] in-person meetings (rather than conference calls),[16,18] practice facilitators' support between meetings,[15] rapid-cycle improvement strategies (for example, the PDSA approach),[6,12,14,16,17] and furnishing practices with quality measure data.[6,17–19] Numerous studies have also found that practices highly value peer-to-peer learning.[6,14–17,20–22]

Some of our findings conflict with those of prior studies. For example, one study found that having practices do preliminary work before a collaborative began (for example, collecting data, analyzing how they currently practice) was considered important by participants,[6] whereas this was not a finding in our interviews; this may be because participants in CHIPRA collaboratives were not typically asked to engage in pre-collaborative work and therefore may not have developed an opinion on such activities. Another study found that collaborative organizers thought building trust between themselves and participants through social activities was important—which was not a finding in our study.[13] We did find, however, that practices viewed collaborative faculty as having more credibility when they had clinical expertise in the topic they were teaching.[13]

What is perhaps most interesting when comparing our findings to the prior literature is that findings from prior studies almost always fall into our second category, approaches aimed at *maintaining engagement*. In contrast, our study found that individuals involved in collaboratives valued a wider range of collaborative features: Although they clearly viewed *maintaining engagement* as important, based on the number of collaborative features mentioned within this category, they also valued approaches aimed at *attracting participation* in the first place, and *facilitating learning* after practices were actively engaged in a collaborative.

Our study's limitations include the fact that we rely primarily on interviewees' perceptions because complementary outcomes data (for example, quantifying quality gains among participating practices relative to comparison practices) were generally not available; some outcomes data are available elsewhere.[10] Also, the states that were awarded demonstration grants and the practices that participated in collaboratives were not nationally representative, so our findings are not necessarily generalizable.

Implications

This study has practical implications for both collaborative organizers and evaluators. Collaborative organizers may benefit from incorporating the collaborative features recommended by our interviewees into their own collaboratives. Given the nascent evidence base on collaboratives in health care, our findings—drawn from hundreds of interviewees who have spent several years implementing or participating in collaboratives—provide some early clues about what strategies may positively influence outcomes and what approaches may be best avoided. Meanwhile, evaluators may want to broaden the scope of collaborative features that they document and assess—moving beyond features that *maintain engagement* to also include features that *attract participants* in the first place and *facilitate learning* after participants are actively engaged. More comprehensively documenting collaboratives' features could help the field better understand the perceived and actual impact of more of the features of collaboratives that interviewees believe matter. Our study's findings can be viewed as hypothesis-generating, in that we identify features of collaboratives that were perceived as working well and may therefore be associated with favorable outcomes on care quality or cost, which researchers may want to rigorously test in future quantitative evaluations.

Funding. This publication is derived from work supported under a contract between the US Department of Health and Human Services (HHS) and Mathematica Policy Research, Inc. (Agency for Healthcare Research and Quality [AHRQ] Contract # HHSA290200900191 Task Order No. 4), under which project the Urban Institute was a subcontractor. Additional funding for this article was provided by the Urban Institute's Fleishman Innovation Fund.

Disclaimer. The observations in this article represent the views of the authors and do not necessarily reflect the opinions or perspectives of HHS or any other federal or state agency.

Acknowledgments. The authors thank Christal Ramos, the Urban Institute; Henry Ireys, Mathematica Policy Research, Inc.; Cindy Brach, AHRQ; anonymous peer reviewers at *The Joint Commission Journal on Quality and Patient Safety*; and CHIPRA quality demonstration staff in the states featured in this article for their review and helpful comments on an earlier version of this article. The authors also appreciate the time that quality improvement collaborative organizers, practice staff, and other stakeholders devoted to answering interview questions.

Conflicts of Interest. All authors report no conflicts of interest.

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