National MCH Workforce Development Center
Advancing Health Transformation

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Developing State Leadership in Maternal and Child Health: Best Practices from the National MCH Workforce Development Center

Contents

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Executive Summary

Background

To improve the public's health today, many reports have called on public health leaders to develop inter-agency and intersectoral partnerships, address social determinants of health, and steer performance improvement at organizational and system levels. Maternal and child health (MCH) studies and competency statements have concurred. In response, since 2013 the federal Maternal and Child Health Bureau has supported the National MCH Workforce Development Center to strengthen the skills of the Title V MCH workforce. This process evaluation describes the Center's Cohort Program and lessons the Center has learned about effective ways to improve "collaborative" or "shared" leadership skills in MCH. The Cohort Program is a 6-8-month leadership development program that enrolls state-level teams for skill development and work-based learning to address a key challenge facing the state. Teams attend an in-person three-day Learning Institute (LI) that teaches concepts, skills, and practical tools in systems integration; change management and adaptive leadership; and evidence-based decision-making and implementation. Teams then complete work back home on their challenges, aided by coaching. At the Program's conclusion, teams report on their progress and next steps. The Program's goals are for teams to expand their repertoire of skills and use Center skills and tools to frame and address their challenge; that teams would thereby strengthen and transform programs, organizations, and policies; that participants would later use Center skills to address other challenges; and ultimately, that participants would improve maternal and child health outcomes.

Methods

This process evaluation is based on evaluation forms completed by attendees at the three-day Learning Institute; six-month follow-up interviews with team leaders; a modified focus group with staff; and staff comments on earlier drafts of this report.

Findings

Participants and staff alike believe that the Cohort Program effectively merges a practical skill-based curriculum, work-based learning in teams, and coaching. The Learning Institute provides a foundation of skills and tools, and benefits from strong instructional design and skilled instructors. The Learning Institute also begins the team's relationship with their coach, offers a chance to build the team, and fosters support from other teams. The ensuing 6-8-month work-based learning period provides structure, accountability, and a "practice space" for teams to think through their challenge and creatively apply and integrate Center skills and tools to address it. In this period, teams also continue to deepen their collaborative relationships and often add new partners. During and after the Learning Institute, the teams find great value in building close relationships with their coach, who provides accessible and tailored guidance in navigating team relationships and applying skills to their challenge. Participants reported that these dimensions were helpful to their skill development and ability to use shared leadership skills to address their state-level MCH challenges.

Wisconsin team member working on a system support map at the Cohort 2020 Learning Institute.

Discussion

The Cohort Program adheres to many practices recommended for improving continuing professional development in the health professions, such as building a program on assessments of learning needs; constructing an integrated series of learning activities to help participants move from practical knowledge and competence to workplace performance; offering practical tools and practice guidelines to foster and reinforce performance improvement; offering opportunities to practice skills in a context that closely mirrors the practice environment; providing coaching in the workplace to help participants overcome barriers; and enrolling teams that represent the types of practitioners who must collaborate in practice to implement the skills being taught. Future reports will describe the Program's impact.

Introduction

To improve public health today, many reports have called on public health leaders to develop inter-agency and intersectoral partnerships, address social determinants of health, and steer performance improvement at organizational and system levels (Erwin & Brownson, 2017; Public Health Leadership Forum, 2020). Simultaneously, needs assessments have shown that leaders need greater skills in related domains, such as building partnerships, integrating systems to address commonly held challenges, collaborating with diverse populations, leading change, solving problems, engaging with policy makers, and using data to gauge needs and progress (Bogaert et al., 2019; Kaufman et al., 2014; National Consortium for Public Health Workforce Development, 2017; Sellers et al., 2015).

Maternal and child health (MCH) studies have concurred. A 2008 report identified systems thinking, change management, and general management as areas that MCH professionals needed to develop (AMCHP, 2008). A 2016 study found that program leaders in jurisdictions supported by the federal Title V MCH Block Grant Program wanted more training in building systems, managing change, and evidence-based public health, which involves selecting, adapting, implementing, and improving effective programs (AMCHP, 2016). The Maternal and Child Health Leadership Competencies (USDHHS, 2018) have supported developing leaders who can understand and strengthen systems and lead organizational change, as have additional needs assessments and statements by MCH field leaders (Grason et al., 2012; Kavanagh, 2015; Petersen, 2015). Raskind et al. (2019) found that large proportions of MCH staff in state and local health departments lacked awareness of three key trends in public health practice – systems integration, evidence-based decision-making, and change management/adaptive leadership. While most respondents self-reported proficiency in skills related to these areas, these self-reported skills varied according to several factors, including higher state contributions to MCH budgets and employee engagement in academic partnerships, such as that described in this article. Awareness or proficiency in all three areas was also related to continuous training opportunities.

In response to these needs, the federal Maternal and Child Health Bureau has supported the National MCH Workforce Development Center since 2013. Headquartered at the Gillings School of Global Public Health at UNC-Chapel Hill and with academic and practice partners around the nation, the Center offers professional development programs to equip the Title V workforce to meet today's challenges and transform public health organizations and systems (Clarke & Cilenti, 2018; Handler et al., 2018; Margolis et al., 2017). Since the MCHB funds the Center through a cooperative agreement, it collaborates with the Center as the Center develops its strategy and allocates resources. Seeking to model and benefit from partnerships, the Center depends on its strong partnerships with several organizations, including the Association of Maternal and Child Health Programs (AMCHP), the membership organization for state-level Title V MCH program leaders, from whom it continually learns more about the needs of state MCH leaders. It also partners closely with the Georgia Health Policy Center, the Joseph J. Zilber School of Public Health at the University of Wisconsin-Milwaukee, the University of Texas Health Science Center at Houston, the National Implementation Research Network, Family Voices, the Catalyst Center, Population Health Improvement Partners, the University of Illinois at Chicago School of Public Health, SUNY Albany, and the National Center for Education in Maternal and Child Health at Georgetown University.

Texas team working together at the Cohort 2020 Learning Institute.

The Center supports the current and future Title V workforce through a range of training and development opportunities. This report describes the Center's flagship Cohort Program (henceforth, "Program") and what the Center has learned from it about effective ways to improve "collaborative" or "shared" leadership skills in MCH. (We define those terms more carefully below.) This 6-8-month leadership development program enrolls state-level teams and includes skill development and work-based learning to address a key problem or "challenge" facing the state.

In an earlier evaluation report, Margolis et al. (2017) described the Program and reactions from the first cohort, who reported that the Program had strengthened skills and partnerships that they could use to

advance work toward Title V program goals. Similarly, Clarke and Cilenti (2017) found that despite several barriers to sustained collaborative work, leaders and teams from the initial cohort were using key skills taught in the program.

This article extends the aforementioned Cohort Program evaluations by describing what the staff has learned to date about how best to structure and conduct the Program in order to accomplish its objectives, with a focus on enrolling participants in teams for work-based learning on state-selected challenges, delivering curriculum and instruction, and providing coaching. The Program builds on the wider call for continuing professional development to use multiple methods over time to enable health professionals to progress from declarative and procedural knowledge to competence and workplace performance (Moore et al., 2009), to build interdisciplinary teams, to expand learning from the training facility to the workplace, and to allow learners to "tailor the learning process, setting, and curriculum to their needs" (Institute of Medicine, 2010). By expanding professional development into the workplace, work-based learning fosters learning from work practices, typically together with others engaged in the same team or type of work (Raelin, 2006). The Program's work-based learning process may more specifically be named as "action learning", in which participants formulate and take action on a challenging work problem and reflect on what they can learn from their experience, aided by supportive peers or coaches (Raelin, 2006, 2019). It also builds on prior evaluations of public health management and leadership development programs, which have shown that team work-based learning can improve skills and confidence, strengthen collaborative networks, and help participants improve programs, organizations, systems, and policies (Orton et al., 2006; Umble, Baker, Diehl, et al., 2011; Umble, Baker, & Woltring, 2011; Umble et al., 2006, 2009, 2012).

The Program also provides a case study of using team work-based learning to develop "collaborative" or "shared" leadership skills needed to address complex multi-party problems (Edmonstone et al., 2019; Raelin, 2019). Traditionally, leadership theory and practice have emphasized the traits or behaviors of effective individual leaders. More recently, however,

scholars have increasingly described leadership as a social process of dialog, action, and reflection among stakeholders which leads over time to shared direction, alignment of people and units around shared goals, and commitment (McCauley & Fick-Cooper, 2015). For example, Heifetz, Linsky, and others have described “adaptive” leadership (Heifetz et al., 2009) as a form of leadership that is needed when organizations and systems face complex problems that can only be addressed long-term if the stakeholders adapt or learn new ways of understanding and addressing problems together. In adaptive leadership, individual leaders do not prescribe single technical answers to complex problems, but rather foster a shared process in which stakeholders reflect together, surface conflicts, and work together to address the problem.

Historically, leadership development programs have varied in form and content, reflecting this distinction between the “individual leader” and “shared leadership” among a group of leaders. Most leadership development programs have largely reflected the “individual leader” concept. They enroll individuals and seek mainly to develop their capacities by offering extensive self-assessments, multi-rater feedback, personalized coaching, and individual skill development; their ultimate goal may or may not be to help leaders foster collaboration. However, in recent decades, many programs have enrolled teams of leaders from organizations or coalitions and – rather than focusing mainly on individual assessment and growth -sought principally to develop teams' collective abilities to define and address shared problems (Day & Dragoni, 2015). Although the Program offers the StrengthsFinder individual assessment (Gallup, Inc., 2020) and individual participants certainly develop skills they can use with other teams, it is mainly situated within the “shared leadership” development stream because its primary goal is to develop the capacity of teams of leaders to identify systemic problems and develop shared solutions that require sustained adaptations within and across organizations and sectors.

Team North Carolina members with their coach, Ki'Yonna Jones, at the Cohort 2020 Learning Institute.

The MCH Workforce Development Center Cohort Program: An Overview

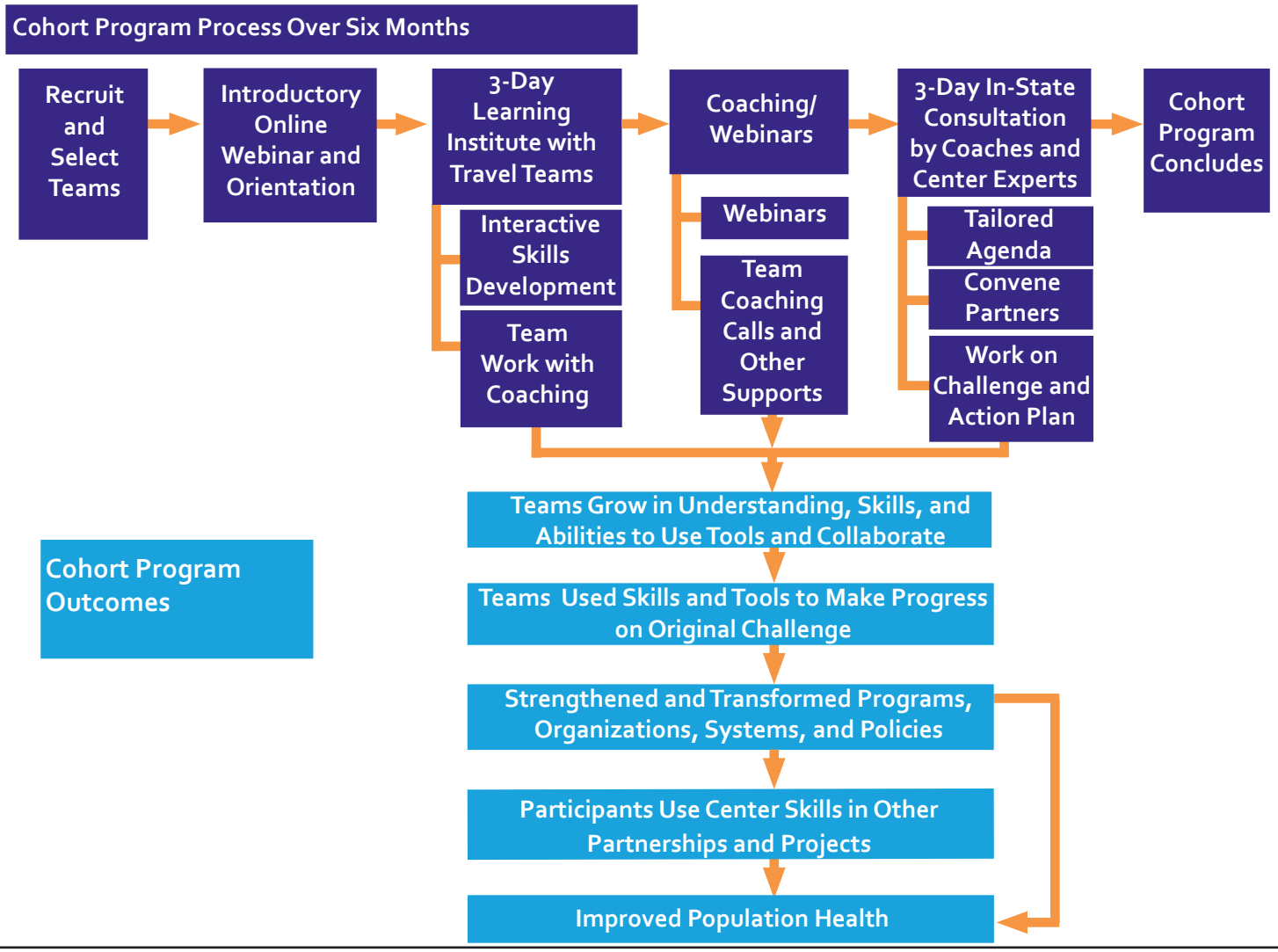
The Cohort Program (Figure 1) enrolls state-level multisector teams to receive extensive skills training and to practice applying those skills on a key state-selected challenge related to health transformation. As defined by the Center, "Health transformation shifts the emphasis… from disease management to prevention and population health management, while improving access to affordable health care; utilizes an interprofessional/ interdisciplinary approach; integrates primary care, specialty care and public health; develops evidence-based, efficient health systems that better incorporate ongoing quality improvement; and drives partnerships across sectors to optimize the wellbeing of MCH populations" (Margolis et al., 2017). As an example of a health transformation challenge, one team sought to apply their new new skills to integrate behavioral health and primary care for Children and Youth with Special Health Care Needs statewide.

Objectives

As seen in Figure 1, the Program's objectives are:

1. To help teams grow in understanding, skills, and abilities to use Center tools to frame MCH challenges and collaborate to address them.
2. To support teams' use of Center skills and tools to address their original challenge in a manner that is systematic, adaptive, grounded in evidence, ambitious, and aimed ultimately toward improving team-selected outcomes related to MCHB Title V outcome measures.
3. Through teams' work, to strengthen and transform public health programs, organizations, systems, and policies.
4. To equip participants to use Center skills with other subsequent challenges and partnerships.
5. Ultimately, through achieving the objectives above, to improve the public's health, including MCH populations served by Title V programs.

Figure 1. How the Cohort Program Improves Practice and the Public's Health



Teams and the Application Process

Teams typically have 10-20 members, more than half of whom are leaders and other key staff members from the state agency funded by the federal Title V MCH Block Grant Program. These Title V agency leaders lead or co-lead the team. Other team members have mainly worked for other state health agencies or programs, local health departments, or partners such as patient advocacy organizations, professional associations, and health systems.

Based on guidance from the field of implementation science, the Program's application process uses an interactive mutual selection model rather than a rigorous scoring guide to unilaterally accept or not accept teams. The Center considers the application to be part of the learning and leadership development process, and models adaptive skills from the beginning by helping applicants state and re-state their aims and goals through the application process. Aided by an interview, the Center also explores the proposed team's makeup and capacity to address the defined state project so changes can be made prior to the official cohort launch. Once a team is selected, their coach meets with them to orient them to the Program.

Program Structure

Teams then participate in an introductory online webinar. Through early 2020, this has been followed by a three-day Learning Institute (LI) in Chapel Hill, NC for the "travel team", which typically includes five or six members of the larger "back-home" state team. The LI includes interactive skill-development workshops and significant time for teams to consider how to apply the skills to their challenge, aided by extensive consultation with their assigned coach. The coach's role is to guide and support the team as they navigate their challenge, to help them apply Center skills and tools to their challenge, and to connect them with other Center subject matter experts and resources. Each Center coach is assigned to one team in each cohort, allowing them to focus intently on that team's progress.

The Center's MCHB funding pays for all team expenses, including travel. Upon matriculation, teams sign an agreement to participate fully in the

Program. The agreement also requires the signature of a senior sponsor within the state health organization and describes how the Center expects teams to engage with their sponsor, including sharing their challenges and accomplishments during and after the Program. In this way, the Center encourages teams to "lead up" as well as "across" with other state leaders.

Travel teams then return home to advance work on their challenge through applying the skills and tools they have learned, together with their larger "back-home" team. In this phase, the team follows a structured approach to their problem, including a logic model with defined activities and expected results that they devise with their coach. In addition, the Program provides supplemental development via webinar to all the teams. Each dedicated coach works with their team in a variety of modes including phone, video (e.g., Zoom) and email to provide feedback on products, advice on team process and task, referrals to Center experts, and to track completion of deliverables. Further, the assigned coach and other Center experts visit each state for a multi-day in-state consultation with the team and other invited stakeholders to help them apply Center skills and tools to their challenge. While the dedicated coaches may not be experts in their teams' specific challenges, they are experienced in public health practice and understand the constraints and opportunities of working in state-level public health. The Program concludes with a webinar in which teams celebrate progress and describe next steps.

Curriculum and Facilitators

Currently, the Program's curriculum, most of which is taught at the three-day LI, centers on three interrelated skills: Systems Integration; Change Management and Adaptive Leadership; and Evidence-Based Decision-Making and Implementation (Table 1). Briefly, Systems Integration skills help participants understand how systemic forces interact to produce and reinforce problems, identify actors who should participate in addressing them, and integrate those actors' points of view to develop shared solutions. Change Management teaches teams to use health transformation and adaptive leadership concepts to address their challenge. It includes segments on team development and partnership that develop teams' basic ability to address their challenge plus

foundational teamwork skills that enable them to practice all skills taught. For example, if teams practice the Mutual Learning Model as taught in this segment, it will help them lead change and adapt interventions to their settings. Evidence-based Decision-Making and Implementation teaches participants how to select, adapt, and sustainably implement evidence-based practices, and other innovations, often developed by the team themselves. The Program also infuses content on promoting health equity and supporting family engagement in service and policy development.

Table 1: Cohort Program Curriculum Topics

General Curriculum Topic	Concepts and Skills Taught
Systems Integration	• Introduce and motivate systems thinking • Methods and tools to facilitate cross-stakeholder discussion of the situation of interest (i.e., what motivated teams to apply) • Methods and tools to develop a shared understanding of the focal challenge and identify leverage points that help shift the entire system and not simply treat the "symptom" of the problem • Understand the network of stakeholders that are needed for an initiative (e.g., who they are, what they care about, how to get the right people engaged, clarify roles and responsibilities) • Understand and work to strengthen your team and/or initiative as a system
Change Management and Adaptive Leadership	• Health transformation concepts • Connection between change, health transformation, and team challenge • Building teams for health transformation • Mutual Learning Model • Technical vs. adaptive leadership • Building and sustaining partnerships
Evidence-Based Decision-Making and Implementation	• Implementation stages • Developing and using performance indicators • Understanding purpose and scope of evidence-based decision making and implementation • Methods and tools to support implementation team development, effective communication and continuous learning • Assess implementation practice to identify strengths and opportunities for improvement
Health Equity	• Foundational practices for health equity • Health equity in transformational work
Supporting Family Partnerships	• Support for family partners participating in Cohort Program via peer support groups • Family engagement in systems toolkit • Standards of quality for family strengthening & support tool

To foster practice change, the Center teaches teams to use applied “tools” that help them put into practice the Program’s key concepts and skills (Figure 2 and Table 2). For example, rather than only telling participants about common barriers to implementing a new practice, the Center helps participants learn to use an Implementation Supports Checklist to identify barriers and ways to counteract them. Similarly, rather than only teaching learners that they should develop a shared view of a problem, the Program asks each team member to write an Individual Challenge Statement describing their view of the challenge, and then helps the team develop a Shared Challenge Statement that synthesizes the views into a shared vision. Teams practice using these tools at the LI so that they will know how to use them with their "back-home" team and other partners. The tools thus help participants move from declarative knowledge (“knowledge about”) and procedural knowledge (“know-how”) (Moore et al., 2009) to competent workplace performance (Institute of Medicine, 2010).

The LI instructors – as well as the coaches – include faculty and staff from UNC-CH and other Center-affiliated institutions.

Texas team member presenting at the Cohort 2020 Learning Institute.

Figure 2: Center Curriculum Tools to Help Teams Apply Skills and Concepts to Work Challenges

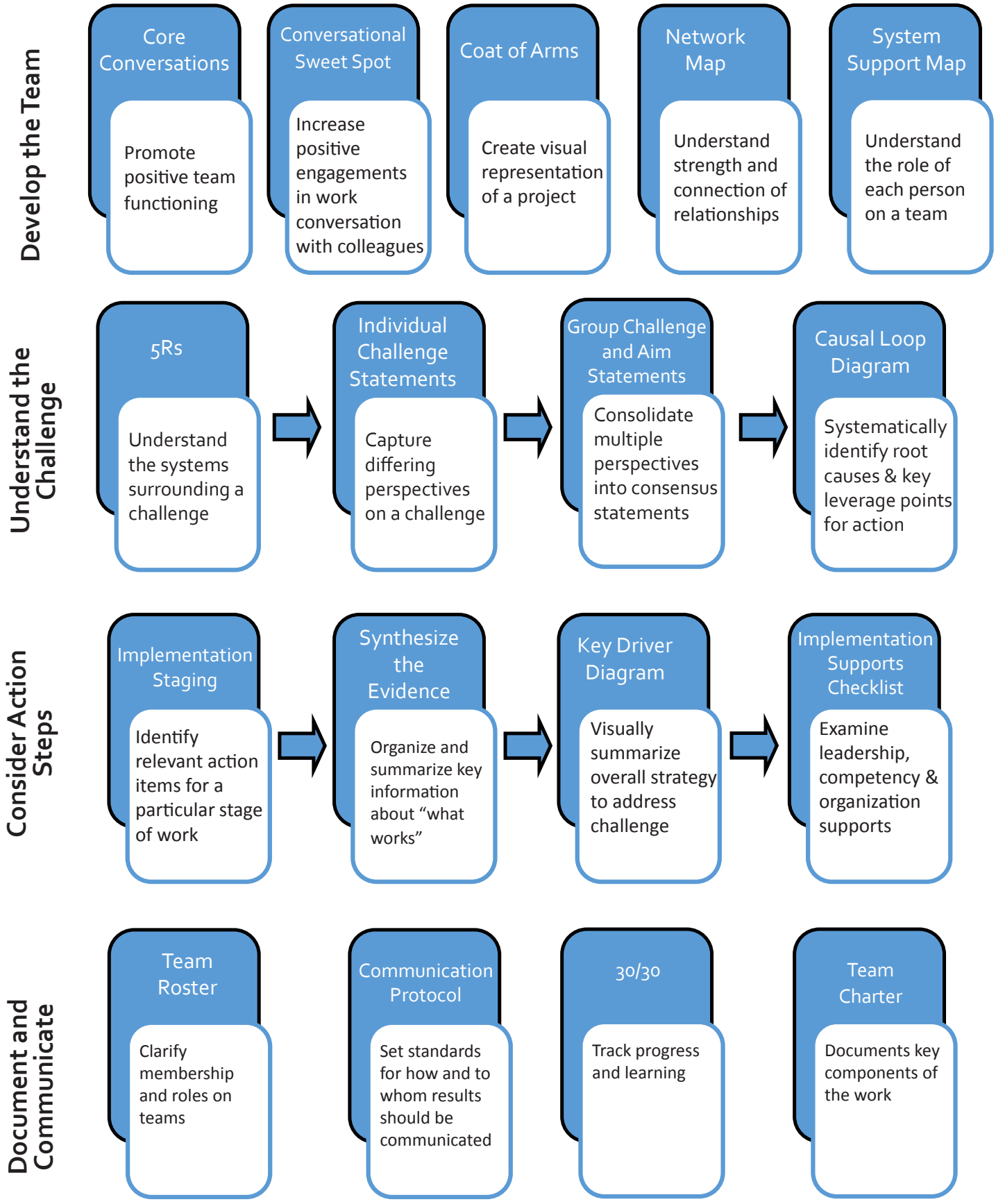


Table 2: Explanations of Center Curriculum Tools

Tools to Develop the Team	
Core Conversations	This tool guides groups through a series of questions to explore multiple aspects of their work together, including strengths, dissent, and commitment to the work.
Conversational Sweet Spot	This tool helps individuals balance candor and curiousity in conversations to promote positive relationships with colleagues
Coat of Arms	This creative activity relies on individual and team strengths to produce a visual representation of a team's transformation challenge.
Network Map	This tool allows individuals to visually represent the strength and density of stakeholder relationships.
System Support Map	System support maps are tools to understand individual systems; their roles, responsibilities, needs, resources, and wishes.
Tools to Understand the Challenge	
5Rs	The 5Rs provides a systems approach to build collective understanding of a complex challenge, allows groups to "zoom out" and see the system around the challenge
Individual Challenge Statements	A mechanism to capture differing perspectives on a complex challenge, allowing leaders and team members to understand stakeholder perspectives.
Group Challenge Statement	This tool consolidates multiple individual challenge statements into a consensus document.
Aim Statement	Often building on a challenge statement, an aim statement provides a concise description of project goals and vision.
Causal Loop Diagram	Causal loop diagrams are used to elicit mental models, examine root causes of challenges, and identify key leverage points for action.
Tools to Consider Action Steps	
Implementation Staging	A framework to examine the "life course" of a complex effort and identify action steps related to each implementation stage.
Synthesize the Evidence	This tool can be used to organize and summarize key information/ findings from your search for "what works."
Key Driver Diagram	A visual summary of the overall strategy that illustrates pathways of change and priority focus areas

Table 2 Continued: Explanations of Center Curriculum Tools

Tools to Consider Action Steps	
Implementation Supports Checklist	A checklist to prompt consideration of the organizational, leadership, and competency supports.
Tools to Document and Communicate	
Team Roster	Team rosters are used to clarify roles in complex projects. Implementation team rosters are used to document roles of individuals on implementation teams.
Communication Protocol	A tool to document agreements with stakeholders with whom the team needs to share information and from whom the team needs information.
30/30	A tool to track the progress and learning of the team.
Team Charter	This tool can be used to support a 30-minute meeting each month to document the team's learning and progress.

Instructional Design Model

The Learning Institute's instructional design model specifically aims to develop team's skills in using the tools. For each tool, the facilitator (as the Program refers to its instructors) teaches what the tool is and accomplishes and demonstrates how teams can use it using examples. Then, teams apply the tool to their challenge, aided by the session facilitator and their coach, who is seated with them at the table. As one example, to teach the causal loop diagram – a complex systems integration tool – the facilitator spends 30 minutes teaching the tool and sharing examples. After this, teams spend at least one hour collaboratively building a causal loop diagram for their state challenge. In this way, teams invest more than half of their LI time actively applying the tools they are learning to their challenge, making the LI more hands-on than a typical "conference". This same instructional model is used in the Program's pre-work and in-state consultations.

Post-LI Support

After the LI, teams work continuously to apply their new skills to address their state challenge. To support them, each team's assigned coach - along with one or more other Center staff members with relevant expertise – visits the team in their state, typically for two days. Most often, the Center staff meet with both the travel team and the larger "back-home" team to assist all team members in using Center skills and tools to address their challenge.

During the period after the LI, the Center also offers topical webinars for all teams to teach additional skills or tools. Of approximately 10 webinars offered to each cohort, some are standard – including the opening orientation webinar and the closing celebration webinar, and those addressing topics such as health equity and family engagement in MCH services - while others respond to specific learning needs in the cohort, such as “Systems Tools to Support Complex Collaborations During COVID-19”.

Between 2014 and 2020, the Center has offered the Program eight times to a total of 52 teams (averaging 6.5 teams per cohort). The most frequent topical foci of teams’ challenges have included improving services for Children and Youth with Special Health Care Needs (CYSHCN) (25%), building collaborative systems to improve services within multiple populations or topics (19%), and improving child health (10%), among others (Table 3). Typical team challenge titles have included “Partner with families to improve systems of care coordination for CYSHCN,” “Improve sustainability of MCH systems of care initiatives in local communities,” “Effectively integrate behavioral health services into primary care for children,” and “Align developmental screening to support young children and their families” to reduce inefficiencies, duplication, and gaps in access. To address these topics, teams have often used Center tools to enhance partner engagement and strengthen partnerships (19%), enhance service delivery (17%), strengthen and streamline screening systems (15%), strengthen health systems (15%), and enhance care coordination (12%), among others (Table 4).

52 total teams participating in the Cohort Program (2014-2020).

25% of teams focused on improving services for Children and Youth with Special Health Care Needs (CYSHCN).

19% of teams focused on building collaborative systems to improve services.

10% focused on improving child health.

Table 3. Frequency of Main Project Topics[1]

Project Topic (n=52)	N(%)
Children and Youth with Special Health Care Needs	13 (25)
Cross-Cutting Topics/Systems Building	10 (19)
Child Health	5(10)
Adolescent Health	4 (8)
Women/Maternal Health	4 (8)
Family Engagement	4 (8)
Developmental Screening	4 (8)
Infant/Perinatal Health	2 (4)
Medicaid	2 (4)
Health Equity	1 (2)
Opioid Prevention	1 (2)
Social-Behavioral Wellness	1 (2)
Nutrition	1 (2)

Table 4. Frequency of Main Project Approach to Addressing Topic[2]

Project Approach (n=52)	N(%)
Enhance partner engagement and strengthen partnerships	10 (19)
Enhance service delivery	9 (17)
Strengthen and streamline screening systems	8 (15)
Strengthen health systems	8 (15)
Enhance care coordination	6 (12)
Transition to a population health approach	5 (10)
Integrate primary care, specialty care, and public health	4 (8)
Improve youth transition to adulthood	2 (4)

[1]Based on 52 teams that attended in the Program's first eight cohorts. Some teams addressed multiple topics; this table presents our designation of their primary topical focus.
[2] Based on 52 teams that attended in the Program's first eight cohorts. Some teams used multiple approaches; this table presents our designation of their primary approach.

This article presents insights from participants, instructors, and staff about how the Program's structure and processes help it accomplish its objectives. It focuses on three key interrelated aspects of the Program: enrolling participants in teams and engaging the teams in work-based learning; curriculum and instruction at the LI; and providing coaching during and after the LI by telephone, Zoom, and the in-state consultation.

Methods

This process evaluation is based on data from the following sources.

Post-Learning Institute Evaluation Forms

Travel team members complete an evaluation form with open- and closed-ended questions at the LI's conclusion. This form captures the most and least helpful aspects of the LI. Qualitative data from these evaluations were reviewed and categorized using inductive coding methods, with codes emerging from individual responses.

Six-month Follow-Up Interviews with Team Leaders

A Center evaluator interviewed one self-selected team leader from each of the teams in the first five cohorts. A few states included a second team member in the interview. Before the interview, the evaluator sent the interview guide to the respondent. It focused on this evaluation question: How did the Center help them advance their MCH population health goals through their team project? The interview guide included multiple choice, listing, and open-ended questions. Respondents were encouraged to circulate the guide to the other team members to solicit their input. All 32 interviews lasted roughly one hour and were recorded and transcribed. Evaluators coded the transcripts using deductive codes based on the Program's objectives and inductive codes that emerged from the interviews and analyzed them using ATLAS.ti qualitative analysis software. The evaluators used the "Sort and Sift, Think and Shift" qualitative analysis approach developed by ResearchTalk, Inc. (Maietta et al., 2019).

Modified Focus Group with Center Staff Center

We solicited reflections from instructors and staff in two ways. First, at a Center all-staff retreat using a modified focus group strategy, staff reflected on the Program's most effective components using comments on flip charts. Evaluators coded the comments according to how they related to the major Program components of team work-based learning, curriculum and instruction, and coaching. In the findings, the evaluators linked themes from the staff comments with similar themes from the participant comments.

Center Staff Feedback

The authors also asked several Center staff to comment on what they believe are the most effective components of the Program. They submitted these comments in informal interviews with the authors and through comments on drafts of this article.

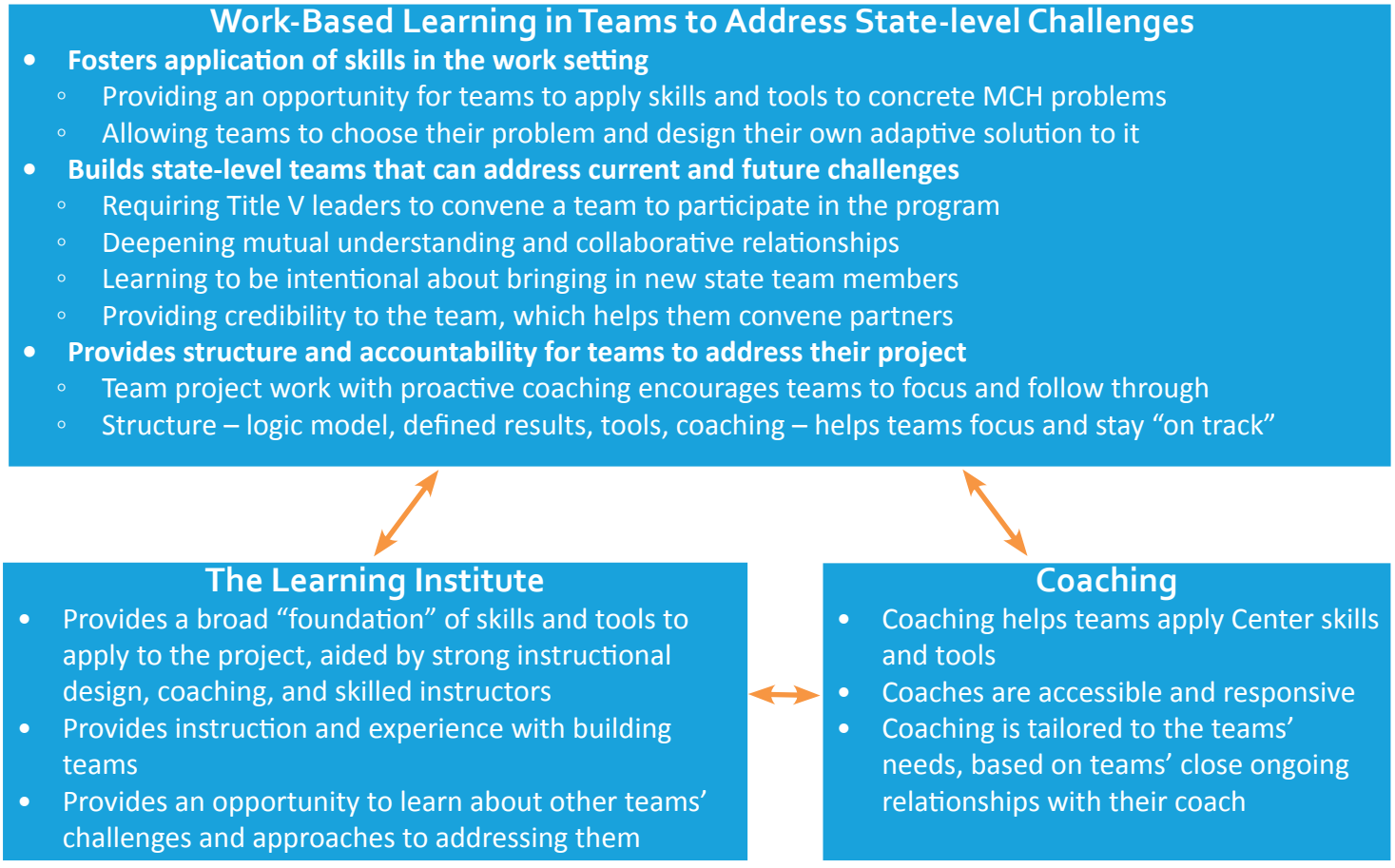
The Office of Human Research Ethics at the University of North Carolina at Chapel Hill Institutional Review Board reviewed the Center's evaluation and determined that it was exempt from IRB approval.

Team Alabama members with their coach, Stephen Orton, at the Cohort 2020 Learning Institute.

Findings

We present insights from participants and staff about how the Program's structure and processes help it accomplish its objectives, in three major categories: Work-Based Learning in Teams to Address State-level Challenges; the Learning Institute; and Coaching (Figure 3). In so doing, we identify some helpful features of these three aspects of the Program. Since these Program features are interrelated and mutually supportive, we also describe how they support one another.

Figure 3: Benefits and Helpful Features of Cohort Program Components



Work-Based Learning in Teams to Address State-Level Challenges

Work-based learning required teams to apply the skills taught in the Program to concrete MCH problems and provided helpful structure and accountability for them to do so, while also building their team so that it could address current and future challenges. The following section highlights benefits for teams that result from work-based learning.

Work-based learning in teams fosters application of skills in the work setting

Providing an opportunity for teams to apply concepts, skills and tools to concrete MCH problems.

One learner stated that the Program provided a "practice space" for participants to progress from understanding a concept to using it in practice with a real problem. This allowed the skills and tools to become more meaningful – "come to life" - and become part of the leader's or team's active repertoire:

> *And what I loved about the Center too is that not only did you give us [these] tool[s] but then you gave us the practice space to apply them because you know, to be honest with you, I've had implementation science as part of a college … program but being able to actually have the didactic … with the real live world problem just helped it come to life.*

Allowing teams to choose their problem and design their own adaptive solution to it.

The Program's "practice space" has two further crucial dimensions: it allows each team to choose the problem it will address and to design its own adaptive solution to it. As these participants noted:

> *Oftentimes the [training or technical assistance provider in other initiatives] is very prescriptive in "we want you to achieve this work on this project," and so I think the Center differs in the sense that it was completely state-driven in terms of what projects we wanted to work on…. [T]here was still that sense of shared learning among the states but with more flexibility.*

You all approve the project and then you let us drive the project. You gave us tools that we needed to drive the project, but we were the actual drivers on the project.

Other participants emphasized the benefits of the Program's requirement for the team to critically reflect on a difficult problem and select, integrate, and apply skills to develop creative solutions. This is central to the Program's emphasis on teaching teams to use "adaptive leadership" to develop "adaptive solutions" instead of relying on a simple "technical solution" that is already in their repertoire. Participants referred to this benefit as making them "sit down and think ... outside the box" and giving them the "time where we could really explore the mutual learning [model] and use tools to think about things and be creative." In this quotation, "mutual learning" refers to a Center teamwork model that encourages members to listen to others' reasoning to construct shared solutions, rather than trying to win the argument because they assume others are wrong. Thus, these benefits - developing adaptive solutions and mutual learning - flow simultaneously from applying tools to critically reflect on a problem in a team setting. As participants explained:

You guys didn't give us a magic pill or a magic answer. You gave us tools to help us critically think through … this project but then [also apply] those tools to help us critically think and tease-out other complex problems that we had. So … you made us sit down and think, think outside the box…

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In the focus group, Center staff concurred with this benefit, noting that teams learn to "apply otherwise esoteric skills and concepts to specific MCH contexts, to make them more real and applicable to Title V," and that "learning happens in the context of hard, often adaptive Title V challenges being addressed." In this way the Center "supports actual implementation practice" on the ground "around something states are already struggling with." This is all aided by the fact that Center staff "stick with folks over time," often enabling the staff to see evidence of change over the length of the

Program. Or as Center staff explained in the focus group, rather than providing a solution, the Center "teaches people to fish" and that as a result states "feel empowered rather than overwhelmed" in addressing systemic problems.

Work-based learning in teams builds state-level teams that can address current and future challenges

The team work-based learning dimension also helped strengthen state teams' abilities to collaborate and thereby more successfully address their current team challenge as well as subsequent challenges. This benefit came about in several ways.

Requiring teams.

One way the Program produced this benefit was simply by requiring Title V leaders to convene a team for focused attention on a common problem. One participant said that the Program "made us come together to focus on a population health initiative." Another noted that while their team members – as staff of various state agencies – had worked together to some degree before the Program, the Program "provid[ed] the opportunity formally through the initial [LI] through the site visit, for us to be brought together and be able to spend a day or a few days … together. I think that was really valuable because we – all of us – move at such a rapid pace."

Deepening mutual understanding and collaborative relationships.

The Program also built teams through activities at the LI that fostered mutual understanding and collaborative relationships. One participant explained that although their team previously worked together and "kind of knew each other," convening for the LI was "kind of like a golden age where you're in the incubator" and that the "personal time we had in Chapel Hill really sealed the deal." As a result, this participant explained that they now "automatically" take the perspective of their teammates and consider the entire "system" when reflecting on their team challenge:

So now we kind of automatically - whenever I talk about home

visiting, I automatically think of early intervention. I mean, we all kind of - we remember each other more. We're more intentional in terms of how we talk about the system. So again, I think that was transformative as well.

Others also described team building at the LI as beneficial:

[What] our team… found most helpful was the actual team building…. There are a couple of partners who … work quite a distance from us and having that time together really built those relationships, really kind of instilled more trust among those partners.

[The] in-person training was really great…. I think it really did help us kind of bring together a group of stakeholders throughout the state to do this work and really align the efforts, which was the goal of the project.

Learning to be intentional about bringing in new state team members.

Other participants reported that their team building experience at the LI had led them to be more intentional about including new partners in their ongoing work. One noted, "Just being intentional with that [at the LI] really kind of refocused us on being intentional … when we have new people come into [the team] - how we kind of integrate them into that process so it doesn't detract from the work that we are doing but still allows us to bring them into the group as well." Another noted that the LI had given them "the capacity to do this work and [learn] how to bring people together to do this work…. By being able to bring us together and create the partnerships that we've had has really created a trust in this work that people are doing in breastfeeding." Another noted:

I feel like [the LI] really did teach that need to build the relationship, help people feel really involved with the process and I think keep people engaged to do this work.

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Providing credibility to the team, which helps them convene partners.

Several participants reported that participating with the Center in the Program gave them added credibility, which helped them recruit additional partners to their team. One noted, "The Center really provided us a lot of credibility.… For our MCO's [Managed Care Organizations], for our other partners… for those that we were seeking partnership with that we had an experience [with] in the past - I think, really, the Center gave us that credibility that helped to bring them to the table." Another explained that the Center had helped them convene a large team that enhanced the credibility of their final team deliverable:

> *[W]hat it really did allow for our team to do is when we came out with our finished product and our plan, we had an entire statewide team that was on board with the vision and … we had a united front within ourselves… And I think without the Center being there to help be that facilitator, we would not have, we wouldn't be where we are now.*

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In the focus group, Center staff concurred with these team building benefits of work-based learning, noting that the Program helps "states partner across organizational/disciplinary lines" and "strengthens collaboration with other agencies [and] groups" because it "provide[s] a reason to interact, build relationships, and tools/coaching to support effective relationship-building." Another Center staff member commented that this added credibility in building partnerships gives the Title V agency additional leadership influence and authority that it would not otherwise have, placing its leaders in the center of health transformation efforts when they might otherwise be sidelined.

Work-based learning in teams provides structure and accountability for teams to address their project.

The Program's work-based learning process also helped teams make progress by providing a defined structure that holds teams accountable for sustained work toward defined results using Center skills and tools. One noted that the Program "forced us to set aside time and really focus on … these specific activities which is sometimes what you need to do," while another explained that the "Center was helpful in keeping us on task and making sure that we followed through." One attributed this to the Center's structured approach to the problem, noting that "there's so much value to doing … this structured work. It really … helps with accountability. It moves our project along. Whenever we start deviating, we can always go back to like the intent of the project and look at our tools and the logic model and get back on track." Another attributed accountability to the proactive work of the coach, who "even if [the team leader] forget[s] to call, they call [the team leader]," which helped keep the work "front and centered." Finally, another learner summarized the value of professional development involving accountable work-based learning work and coaching as follows:

> *I would definitely say that this [program] was more so really about accountability and keeping us moving forward…. I think that the project was focused on results… which is something that we needed. So, I would say most of the [professional development programs] you go to are usually for like a day and then you're done. People take the training and they throw it on a shelf and they move on but when you have somebody that interacts you with people a little while, it's kind of hard to just let it drop.*

"I would definitely say that this [program] was more so really about accountability and keeping us moving forward…"

In summary, participants reported that work-based learning in teams helped participants apply and integrate Center skills and tools, build state-level teams, and provided structure and accountability for teams as they addressed their projects.

The Learning Institute

The three-day Learning Institute's (LI's) curriculum and instruction provided a strong foundation of skills for teams to apply to the team challenge. It also provided instruction and experience with building teams and an opportunity to learn about other teams' work and receive peer support from other teams. These benefits are described in more detail below.

The Learning Institute provides a broad "foundation" of skills and tools to apply to the team challenge, aided by strong instructional design, coaching, and skilled instructors.

In the evaluation following the LI, 100% of respondents stated that they would recommend the LI to colleagues, while 73% strongly agreed and 25% agreed that they could "apply the tools/skills I learned at the LI to advance my Cohort project".[3] When asked to explain their answer to the latter question, some respondents described how learning to use all of the skills and tools would help their team with their project:

> *The Institute was very effective in presenting the tools and skills necessary to move our project forward.*

> *[The LI provided] comprehensive tools, training, and methods for [the] project, [for] change and process improvement management for public health.*

> *Practicing with the different models and tools and new examples will help me apply them to our state's projects.*

> *There was enough reinforcement of tool applications and how they fit in the larger picture of structuring and executing the project.*

> *I feel I have tools/evidence/power to influence decision makers on my team. I feel like we have a focus[-ed] goal to work on and can make progress.*

[3] The first statistic ("recommend") is drawn from the data for four cohorts of whom we asked this question in this format (overall return rate = 71%). The second statistic ("can apply") is drawn from the data for three cohorts of whom we asked this question in this format (overall return rate = 66%).

Other participants described learning specific skills that would help them, such as:

> *The challenge and aim statement help[ed] us to be more focused as a group in order to help our project succeed.*

> *The tools like the system support map helped us understand one another's responsibility and expectations.*

In another question on the assessment at the conclusion of the LI, 48% strongly agreed and 42% agreed that the LI will "help me engage meaningfully/lead my state in health transformation" in other challenges beyond their current state challenge.[4]

When asked to describe the most effective aspects of the LI, many participants stated that they greatly benefited from its instructional design, which includes (a) presenting a concept or skill, along with an applied tool that will help the team use it in practice; (b) demonstrating with an example how the tool may be used; and (c) "team time" seated at round tables to apply the tool to their challenge with the help of their coach, who was seated with them. Along these lines, participants stated that the most effective workshop aspects were:

> *Team time; having our coach at all team time [meetings].*

> *Taking tools to team time and using them to further define our project aims, goals, objectives, and outcomes.*

> *The discussion of concepts and tools and then the team time to discuss. The pacing and the concepts presented. The hands-on activities with the use of post-its, flip charts, etc. Different ways to stimulate thoughts/brainstorming, digestion of concepts.*

> *Team time. This was the first in-person interaction our team has had and we were able to further discuss aspects of the project and create a feasible plan.*

"This was the first in-person interaction our team has had and we were able to further discuss aspects of the project and create a feasible plan."

Others mentioned the "very competent trainers," noted that "the Center

[4] This statistic is drawn from the data for six cohorts of whom we asked this question in this format or one very close to it (overall return rate = 81%).

staff and teachers are amazing," and recommended, "Don't change the Center staff! [They are] wonderful teachers and information." Still others mentioned the value of specific tools taught.

The Learning Institute provides instruction and experience with building teams and an opportunity to learn about other teams' challenges and approaches to addressing them.

We have seen above that participants valued the LI as an opportunity to build their team. Participants also valued getting to know other participants and becoming more familiar with work in other states. As one stated, "I found listening to what other states were doing to be most effective aspect of the workshop." In the focus group, Center staff said that the Cohort model affords informal peer support, friendly "peer pressure" to address their challenge, and an opportunity to learn about other states' work.

Coaching

Learners also reported that the Center's accessible and tailored coaching was invaluable in helping them apply skills and tools to their work, as described below.

Coaching helps teams apply Center skills and tools.

We have seen above that participants found coaching helpful in learning to use Center skills and tools at the LI. Some participants also commented that while the LI provided a "backbone" or "orientation and foundation" of skills and tools, their nascent skills were potentiated by the Center's subsequent coaching on the skills and tools to address their challenge (Figure 3). This subsequent coaching occurs by telephone and also through the multi-day in-state consultation.

> *I went to the initial training in North Carolina. I felt like that gave us the backbones of what we can do. But then when we met in person, you know, in Indiana when the … coaches came [for the site visit] - I felt like it was then, "Okay now we can apply this to what we're doing."*

> *I think coaching was 90 percent of the [Program] experience. I mean, the [3-day] meeting in North Carolina was a good orientation and*

"I think coaching was 90 percent of the [Program] experience."

foundational piece of it, but I think that the coaching was the primary part that was helpful.

Coaches are accessible and responsive.

Many participants remarked about how coaches' accessibility and responsiveness helps them continue to make progress on their team challenges:

I felt like I had great support during the past several months. You know, I could always call up [the coach] and ask questions, kind of talk through some ideas.

We could always access our coach and it was like understood that we could get a turnaround in our questions or feedback really … quickly.

[T]he level of expertise of the coaches assigned to our team, because of being able to reach out and connect with them at any … given time if we had questions, if we had issues [was helpful].

Coaching is tailored to the teams' needs, based on teams' close ongoing relationships with their coach.

Participants greatly appreciated how Center coaches provided guidance that was tailored to the teams' evolving needs. The coaches did this on the basis of close relationships that they had established with their teams at the LI and which continued throughout the Program through telephone calls and the in-state consultation. Some participants stated that this close relationship helped the teams be honest about problems that arose during the Program, fostering more tailored coaching on how to apply Center skills and tools to the project:

What's been really interesting is how you have a coach that seems dedicated to your team… It's not one size fits all. It seems very tailored.

The difference between [other training we have received] and the workforce Center was we developed really close relationships with the people from the workforce Center and it just felt like, "We know these people or they know us" and we're comfortable in saying "You know, this is what we have right now, this is the problem. How can we resolve

"…and we're comfortable in saying "You know, this is what we have right now, this is the problem. How can we resolve this? Can you help us?" - without trying to hide anything."

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Having [our coach] sit at our table [at the LI] the entire time, work with us, know where we started from, having the calls and the coaching, know we're not having to catch her up every single time we talk. She knew where we were; that was incredibly helpful.

Direct interactive experiences were helpful and especially the [coach's] ability to adapt to … our needs because, you know, things had changed quite a bit in the months [after the LI and] before we had the site visit as far as our focus at the time of the site visit.

In the focus group, Center staff agreed that a key helpful feature of the coaching was that it offers "tailored navigation through the tools and resources available" that is "customized to whatever state needs dictate" and with a "focus on the practitioner". They noted that a key success factor is the coaches' "interpersonal expertise" and that teams have "a dedicated coach … [resulting in] a rich relationship that supports and connects teams over time to Center resources" and that adapt to teams' evolving needs. One staff member noted that since "states have variable personalities and roles, the role of coach has [often] been more relational and guiding, teamwork, trust, building state confidence, messaging, etc. rather than content expertise." Other staff mentioned that coaches provide a level of accountability for teams to keep working on their challenge amidst their other daily responsibilities.

Team Indiana working together at the Cohort 2020 Learning Institute.

Discussion

Participants and staff alike believe that the Program effectively merges a practical skill-based curriculum, work-based learning in teams, and coaching. The LI provides a broad foundation of skills and tools, begins the team's relationship with their coach, builds the team, and fosters support from other teams. The ensuing 6-8-month work-based learning period provides a "practice space" for teams to think through their challenge and creatively apply and integrate Center skills and tools to address it. In this period teams also continue to deepen their collaborative relationships and often add new partners. During and after the LI, teams find great value in building close relationships with their coach, who provides accessible and tailored guidance in navigating team relationships and applying skills to their challenge. Participants endorsed these dimensions of the Program as helpful to their skill development and ability to use shared leadership skills to address their state-level MCH challenge.

The Program adheres to many practices recommended for improving continuing professional development in the health professions (Moore et al., 2009), including but not limited to: building a program on assessments of participant learning needs; constructing an integrated series of learning activities designed to help participants move from practical knowledge to competence to workplace performance; offering tools and practice guidelines to foster and reinforce performance improvement; offering opportunities to practice skills in "a context that resembles as closely as possible the practice environment" or in the actual practice environment (Moore et al., 2009); providing feedback from coaches in the workplace to help participants overcome emergent barriers; and enrolling interdisciplinary teams, or more broadly, teams that represent the types of practitioners who must collaborate to implement the skills being taught (Institute of Medicine, 2010). The Program's methods also reflect Raelin's description of using team-based action learning for developing shared leadership (Raelin, 2019).

Prior studies have also reported that learners value participating in team-based learning to address real public health problems (Orton et al., 2006; Umble, Baker, & Woltring, 2011; Umble et al., 2012).

This paper has documented the Cohort Program's structure and methods and identified its strong points as viewed by participants and instructors. Further studies are underway to document the Program's impacts on participants and teams and the outcomes of the team projects.

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