

**A Qualitative Study on U.S. Maternal and Child Health Skills  
Perceived as Critical to Achieving National Performance Measures**

By,

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## **Introduction & Purpose**

With the passage of the Affordable Care Act of 2010 and the Maternal and Child Health Bureau's (MCHB's) transformation of the Title V Block Services Grant, the U.S. maternal and child health (MCH) workforce needs key skills to respond appropriately to a changing health care environment.<sup>1</sup> For MCH professionals operating under the Title V Block Grant, national performance measures (NPMs) determine the processes by which program outcomes are achieved.<sup>2</sup> To achieve a competent MCH workforce that can address MCHB requirements, critical skills must be identified for workforce development. This paper will present findings from a qualitative research study on MCH leaders' perceptions of essential skills needed to achieve national measures. Findings from this study can be used to inform workforce development content at the state/jurisdiction and local levels. In this paper, the MCH workforce refers to all public health professionals who work for or partner with state health departments to deliver public health services to maternal and child populations. 'Skills' and 'competencies' are used interchangeably throughout the paper.

The study addresses two research questions:

1. Which skills do MCH workforce leaders perceive as critical to achieving NPMs?

2. Should the MCH workforce develop a set of core skills in order to address achieving all NPMs or should the workforce foster essential skills according to each specific NPM?

Skills identified in this study's findings are linked with two sets of competencies – the Council on Linkages Between Academia and Public Health Practice's (the Council on Linkages) public health workforce competencies and the National MCH Workforce Development Center's foundational NPM skills document.<sup>3</sup>

There are eight Council on Linkages public health domains:

1. Analytical/assessment skills
2. Policy development/program planning skills
3. Communication skills
4. Cultural competency skills
5. Community dimensions of practice skills
6. Public health science skills
7. Financial planning and management skills
8. Leadership and systems thinking skills<sup>3</sup>

The domains are endorsed by the Centers for Disease Control and Prevention and the U.S. Department of Health Resources and Services Administration (HRSA) and thus were chosen as a validated list of public health competencies for the data analysis and discussion of this paper.<sup>4</sup>

The second set of competencies used in this study come from the National MCH Workforce Development Center (the Center), a MCHB-funded center that provides

technical assistance and training to state/jurisdiction Title V agencies. A NPM workgroup at the Center identified essential MCH workforce skills needed to achieve each of the 15 federal measures. Although not yet available externally, the Center outlined skills necessary to address each specific NPM and a list of foundational skills applicable to all NPMs. The Center skills categories used to inform part of the interview script (Appendix 1) are:

1. Population health
2. Strategic planning and program design
3. Strategic alliances and effective partnerships
4. Consumer engagement
5. Policy and program implementation
6. Communication
7. Advancing equity
8. Data-driven decision making

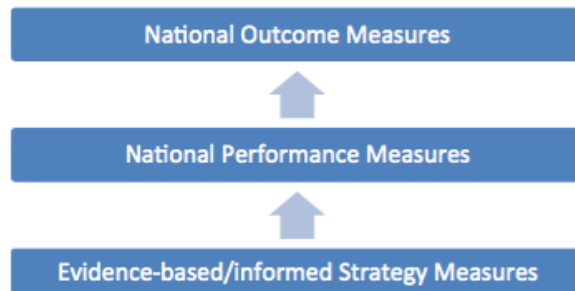
The author of this paper received guidance from Center staff in designing the study and key informant interview script.

### **Title V Background**

The Title V MCH Block Grant is a formula grant that awards funds to U.S. states/jurisdictions to ensure provision of health services to maternal and child populations, reduce the prevalence of adverse health outcomes among mothers and children, and promote family-centered, community-based coordinated care to populations of mothers and children.<sup>2</sup> Title V programs were established under Title V of the 1935 Social Security Act with the mission of ensuring maternal and child

population health and equity in the U.S.<sup>5</sup> Title V became a block grant program through the Omnibus Budget Reconciliation Act in 1981.<sup>6</sup>

*Table 1. MCHB Block Grant Measurement Framework*



Over the years, accountability for how Title V federal funds are used has increased. In 1993, the Government Performance Results Act required Title V programs to establish measurable goals, outcomes, and processes, represented by MCHB’s three-tiered measurement system (Table 1).<sup>7,8</sup> This act spurred the 1997 creation of national performance measures (NPMs) to guide MCH work (Table 2).<sup>8</sup> Since 1997, Title V programs identify NPMs in their applications for block grant funds to guide work processes.

*Table 2. MCHB National Performance Measures, 1997 – 2014*

Number	Measure
1	The percent of screen positive newborns who received timely follow up to definitive diagnosis and clinical management for condition(s) mandated by their State-sponsored newborn screening programs
2	The percent of children with special health care needs age 0–18 years whose families partner in decision making at all levels and are satisfied with the services they receive
3	The percent of children with special health care needs age 0–18 who receive coordinated, ongoing, comprehensive care within a medical home
4	The percent of children with special health care needs age 0–18 whose families have adequate private and/or public insurance to pay for the services they need
5	Percent of children with special health care needs age 0–18 whose families report the community-based service systems are organized so they can use them easily
6	The percentage of youth with special health care needs who received the services necessary to make transitions to all aspects of adult life, including adult health care, work, and independence
7	Percent of 19–35 month olds who have received full schedule of age appropriate

	immunizations against Measles, Mumps, Rubella, Polio, Diphtheria, Tetanus, Pertussis, Haemophilus Influenza, and Hepatitis B
8	The rate of birth (per 1000) for teenagers aged 15 through 17 years
9	Percent of third grade children who have received protective sealants on at least one permanent molar tooth
10	The rate of deaths to children aged 14 years and younger caused by motor vehicle crashes per 100,000 children
11	The percent of mothers who breastfeed their infants at 6 months of age
12	Percentage of newborns who have been screened for hearing before hospital discharge
13	Percent of children without health insurance
14	Percentage of children, ages 2–5 years, receiving WIC services with a Body Mass Index (BMI) at or above the 85th percentile
15	Percentage of women who smoke in the last 3 months of pregnancy
16	The rate (per 100,000) of suicide deaths among youths aged 15 through 19
17	Percent of very low birth weight infants delivered at facilities for high-risk deliveries and neonates
18	Percent of infants born to pregnant women receiving prenatal care beginning in the first trimester

In 2014, MCHB administered the Title V Block Grant Transformation and released new NPMs (Table 3).<sup>1</sup> The new NPMs provide measures to achieve outcomes in infant mortality, black infant mortality, neonatal mortality, postneonatal mortality, perinatal mortality, and child death. According to MCHB guidance, each state/jurisdiction will choose eight NPMs in their Title V Block Grant applications in 2016.<sup>2</sup>

*Table 3. MCHB National Performance Measures, 2015 – present*

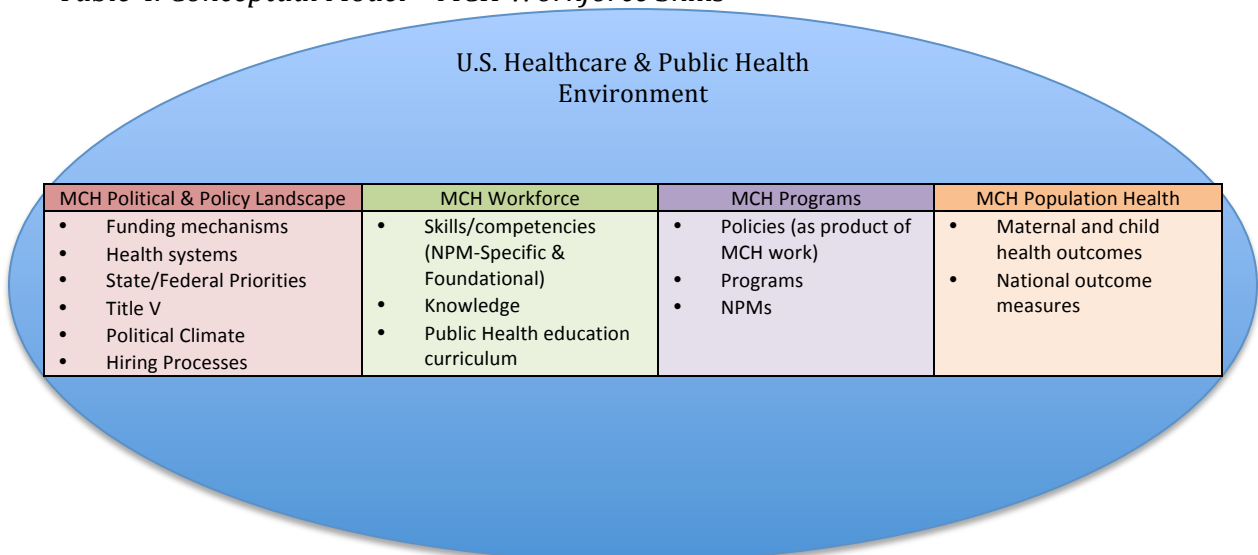
<b>NATIONAL PERFORMANCE MEASURES</b>		
<b>Number</b>	<b>Performance area</b>	<b>Indicator</b>
1	Well-woman visit	Percent of women with a past year preventive medical visit
2	Low-risk Cesarean Deliveries	Percent of cesarean deliveries among low-risk first births
3	Perinatal Regionalization	Percent of very low birth weight infants born in a hospital with a Level III+ Neonatal Intensive Care Unit
4	Breastfeeding	a) Percent of infants who are ever breastfed and b) Percent of infants breastfed exclusively through 6 months
5	Safe Sleep	Percent of infants usually placed to sleep on their backs
6	Developmental Screening	Percent of children ages 10 – 71 months receiving a developmental screening using a parent-completed screening tool
7	Child Injury	Rate of hospitalization for non-fatal injury per 100,000 children ages 0 – 9 years and adolescents ages 10 – 19 years
8	Physical Activity	Percent of children ages 6 – 11 years and adolescents ages 12 – 17 years who are physically active at least 60 minutes per day
9	Bullying	Percent of adolescents ages 12 – 17 years who are bullied or who bully others
10	Adolescent Well	Percent of adolescents ages 12 – 17 years with a preventive medical visit

	Visit	in the past year
11	Medical Home	Percent of children with and without special health needs having a medical home
12	Transition	Percent of children with and without special health care needs who received services necessary to make transitions to adult health care
13	Dental Health	a) Percent of women who had a dental visit during pregnancy and b) Percent of infants and children, ages 1 – 17 years who had a preventive dental visit in the past year
14	Smoking	a) Percent of women who smoke during pregnancy b) Percent of children who live in households where someone smokes
15	Adequate insurance coverage	Percent of children ages 0 – 17 years who are adequately insured

### *MCH Skills and NPMs*

A conceptual model (Table 4) frames MCH workforce competencies within Title V Block Grant requirements and the overall U.S. health environment. The first column of the model represents key policy and political factors, including those of Title V, of the MCH landscape. The next column, workforce, depicts factors influencing workforce performance. The first factor, skills/competencies, specifies both NPM-specific and core skills, addressed in research question two. The third column, MCH programs, represents outputs of a competent MCH workforce, including NPMs. The final column represents workforce impacts of MCH outcomes and outcome measures.

*Table 4. Conceptual Model – MCH Workforce Skills*





A competent workforce is essential to achieving positive program outcomes. Workforce development and training have been identified as important activities to ensure competency.<sup>9</sup> The content of workforce development for MCH and Title V should match skills needed to achieve national measures. The following section presents findings that identify essential Title V/MCH workforce competencies from a qualitative research study.

## **Methods**

### *Introduction*

Data was collected through 10 key informant interviews with one MCH leader from each U.S. Health Resources and Services Administration (HRSA) region. This study used key informants because they represent experienced professionals familiar with Title V services and federal block grant requirements. Braun and Clarke's model for thematic analysis guided the analysis of 10 key informant interview transcriptions among Title V employees in leadership positions.<sup>10</sup> The identification of themes during analysis was also guided by Huberman and Miles' conceptual codes-to-theory model for qualitative inquiry.<sup>11</sup> The data analysis produced four themes that represent MCH leaders' perceptions of skills needed to achieve NPMs and addressed the study's research questions. The subsections below describe in detail the participants, process, and data analysis.

### *Participants*

Ten key informant interviews were conducted among Title V professionals in leadership positions. One state/jurisdiction from each U.S. Department of Health and Human Services Health Resources and Services Administration (HRSA) region was randomly selected. For each random selection, a Title V employee was contacted to request an interview. Some Title V employees had worked with the Center and were contacted first for that state/jurisdiction. Key informants from states/jurisdictions that had not previously worked with the Center were recruited by ‘cold’ contacting Title V directors. No state/jurisdiction declined participation by their Title V office. If key informants initially contacted declined, they referred the researcher to another key informant in their office. Table 5 depicts key informants’ years of experience and professional title by HRSA region. For two of the interviews (HRSA 2 and HRSA 10), more than one interviewee participated, per the interviewees’ request.

*Table 5. Key informant characteristics*

<b>HRSA Region</b>	<b>Years Having worked in MCH</b>	<b>Current Title</b>
1	36	State Title V Director
2, n=3	20 10 39	State Title V Director Title V Coordinator, Division of Family Health Associate Director, Division of Family Health
3	14	State Title V Director
4	15.5	Epidemiologist IV, Senior MCH Epidemiologist
5	16	State Title V Director (interim)
6	14	State Health Department Health Services Manager
7	14	State Title V Director
8	40+	Unit Manager for MCH
9	1	Title V MCH Program Manager
10, n=2	36 11	State Title V Director Manager, Perinatal & Early Childhood Health Unit

### *Process*

Interviews were conducted over the phone using an open-ended, structured interview script (Appendix 1). The interview asked informants which specific skills under the Center's NPM skills categories the Title V workforce needs to achieve national measures. A single researcher, a MPH candidate at the UNC Gillings School of Global Public Health, scheduled and conducted the interviews. The researcher had coursework training in conducting open-ended interviews for qualitative research. Interviews took place over the course of one month. The average duration of an interview was 34 minutes. A third party transcribed phone interviews. The researcher checked transcriptions for accuracy using original recordings. Transcriptions and the original recordings were uploaded into Atlas.ti for data analysis.

### *Data Analysis*

Thematic analysis of the data set began with familiarization by listening to, reading, and taking notes on transcripts. Subsequently, the researcher conducted three rounds of coding in Atlas.ti version 1.0.43. In an initial round, codes were created using the Council on Linkages core competencies to frame coding language, linking data sections to the eight domains. In two more rounds, codes were created at the semantic and latent levels, incorporating explicit content from the data and underlying assumptions or ideologies. Using a basic qualitative inquiry conceptual model, codes were then grouped into categories and subcategories.<sup>11</sup> The categories were used to identify themes. Themes were verified across all 10 HRSA

interviewees using the co-occurrence table and code document table analysis display tools in Atlas.ti. Illustrative quotes were identified and linked to themes.

## **Results**

Overall, respondents described skills needed to address all national measures.

Themes are presented below in the context of the research questions. For research question one, evidence-based practice and basic data analysis skills, the ability to align MCH work with partners, including consumers, and communication skills are considered critical to achieving performance across HRSA regions. Under research question two, foundational skills are considered more important than measure-specific skills. Quotes are identified by HRSA region.

### **Themes of research question one – Which skills do MCH workforce leaders perceive as critical to achieving national performance measures?**

#### ***Theme 1 – Skills in evidence-based practice (EBP) and basic data analysis***

The terms ‘evidence’ and ‘data’ were often used synonymously among interviewees. In each skills category, informants strongly emphasized using data to inform work that provides services at the local and state levels and at all organizational levels. All MCH leaders discussed the importance of skills in evidence-based practice (EBP). When asked for overall skills critical to MCH work, one informant mentioned EBP first:

*“I think that workforce skills that are important are the skills and knowledge on researching and identifying evidence-based or evidence-informed practices. The ability to review practices and determine if those are appropriate for achieving the goals that, that your particular state wants to achieve and evaluating, does it have sufficient resources to implement those strategies?” (HRSA 1)*

All informants prominently discussed the importance of data analysis skills, with an emphasis on using data to choose programs and advocate for and defend policies affecting MCH populations. EBP was linked to choosing appropriate program interventions, as illustrated in the quotes below.

*“Like for some of our teen pregnancy prevention programs, there are a lot of evidence-based programs. So I think another skill that people need is how to make decisions on what strategy and intervention should be used with which populations.” (HRSA 3)*

*“The leadership has to understand data, and know its role in making those decisions. So the data people need to have some skillsets, but also the leaders in how they take that -- how they take that data to inform any decisions that they make.” (HRSA 9)*

Many informants also linked EBP and basic data analysis to the ability to leverage funding for their Title V work. For example, when discussing programs implemented in their state/jurisdiction, an informant from HRSA Region 6 stated that using data to support programmatic decisions helps to stabilize funding.

*“Data-driven decisions on what we do are - they’re much more credible in a state where the resources kind of go up and down and shrink and expand, having good data behind what it is you want to do makes your program less susceptible to cuts, it makes it more susceptible to level funding or funding increases.” (HRSA 6)*

While highlighting the importance of data analysis skills and using evidence to inform decisions, these skills were also identified as current skills gaps. Informants expressed that a lack of data analysis skills among the workforce is problematic to its competency. In some cases, informants described how they have intervened to provide training and support to increase staff competency. The quotes below illustrate EBP and basic data analysis as a skills gap.

*“I think that’s [evidence-based strategies and practices] something that has always sort of been in the back of our minds. But it hasn’t been a focus. So making sure that we’re doing, you know, some of those practices that have been tested and tried.” (HRSA 7)*

*“Actually, you know, we have our folks - they had to practice. We had to teach them how to do research on looking at evidence-based strategies and interventions [...] we really had to start all the way back at the beginning to try to help people before they could even start doing the research on the evidence-based strategies and interventions.” (HRSA 3)*

*“[...] knowledge of data systems and surveillance systems and how one links that data and uses that data to inform programs is weak and what we've tried to do here is really try to integrate every program so that we may have a programmatic expert and then we have a colleague from the MCH, my MCH Epi unit, who's kind of linked with that particular program.” (HRSA 10)*

*“And then the other part is they don't need to be epidemiologists. But they need to have some ability to interpret that data and pull in. And be comfortable pulling in the resources [...] that are available to do more analysis if you don't have that capacity.” (HRSA 1)*

## ***Theme 2 – The ability to align MCH work with partners and consumers***

Title V and MCH work is done at the local, state/jurisdiction, and national levels. This necessitates partnering with agencies in sectors outside of MCH and health. Considering the integral role of stakeholders in Title V work, it is no surprise that all key informants discussed the ability to align MCH work with partners' goals, agendas, and funding as critical. Specific partners identified included partners in housing, transportation, education, business, medical provision (including providers and MCOs), Medicaid, and consumers. The quotes below illustrate that the ability to engage partners from a variety of sectors is important to both Title V services and programs and to leverage funding.

*"For instance you might want to engage business leaders because you're talking about the future workforce and those folks might be able to assist in terms of funding or what have you. You might want to engage somebody in transportation, housing. So it's very important that you be able to really look at it from a broad enough perspective to see who are the key alliances that you need to be - stakeholders you need to be aligned with." (HRSA 5)*

*"A lot of folks really struggle with is [how] to work with Medicaid in their own state. And Medicaid plays a huge role especially in maternal and child health and so having funding opportunities with Medicaid, insurance opportunities with Medicaid, how do you get those folks at the table." (HRSA 6)*

*"Obviously, at the state level we can't do everything on our own and we rely a lot on our internal and external partners. And so, I think it's very important to establish those relationships early on and have good working relationships with the partnered entities that you feel are the ones that's actually going to help you get the work done out in the field." (HRSA 4)*

*"And understand that no agency has all the skills sets needed within their organizations. And so how do you bring others from other parts of the organization or from external to the organization and then involve them in that process?" (HRSA 1)*



When discussing partners, informants frequently referenced ‘unlikely partners’ with whom MCH must be able to align. There was the general sentiment that MCH may have historically partnered with the same agencies but a changing healthcare environment necessitates innovative partnerships. Engaging partners and ‘unlikely partners’ was also linked strongly to leveraging funding for MCH programs. The three quotes below represent well the subtheme of engaging unlikely partners outside of the formal MCH system.

*“[...] knowing individuals [is a fundamental competency], you know, stakeholders and that’s the formal and the informal system, because if you really want to understand what’s going on in, you know, in the community you have to understand who the key players are and that isn’t always, you know, the formal service system.” (HRSA 2)*

*“Some of the skills that we need to know are aligning ourselves with some, probably non-traditional partners. I think we do a good job of aligning with those that think like us and do similar things [...] But you know, if you’re thinking about things like, bullying - one of the new performance measures - our traditional partners probably aren’t the ones that we need to be working with. We need to be working with schools, or adolescent groups, or after-school programs, and things that - instead of our traditional health partners that maybe we’ve used in the past.” (HRSA 7)*

*“Once you know who some of these unlikely partners might be, what are the requirements from any federal funding they might get that you can then meet? So yet again thinking outside the box, you know? Not only are an unlikely partner, but how*

*do we use these dollars that are coming in, which might have a slightly different parameter to them, but use them effectively?” (HRSA 9)*

Another subtheme identified under the ability to align MCH work with partners was engaging consumers as partners. Informants strongly linked partnering with consumers to effective program planning and implementation.

*“If you’re thinking about MCH workforce from a local level, [...] there’s skill that are - in terms of engaging the patients and being able to encourage them to - or identify what their needs are on a personal level and be able to engage them in a plan to help move them in the direction or achieve the goals again of the program.” (HRSA 5)*

*“But I think for the MCH world, I’ve always been a big believer that the participatory model is really the best model that you see. Consumers and families our constituents of one part of the group and providers is another part of the group and funders another part of the group. And that really is the wheel. And you have to have all three of those pieces.” (HRSA 3)*

Consumers were identified as important to program development and implementation, yet many informants expressed concern over the workforce’s ability to align with consumers in a meaningful way. Overall, meaningful alignment with consumers was considered a challenge. The quotes below illustrate this concern, suggesting that the ability to align with consumer partners is a skills gap.

*“So having people that have that skillset [aligning with consumer partners] is critical, and I don’t think we utilize them enough. They’re not necessarily really on our - on our end - on the service provider end or the state end - really gone out and sought and brought to a table in a very methodical manner, like, being a part of some of our, like, coalition activities, or advisory boards.” (HRSA 9)*

*“I think looking at strategies to engage consumers in sort of that focus where you don’t have that maybe long-lasting, one-on-one relationship with families, is something that we would need and could work on...” (HRSA 7)*

*“Here’s one that we struggle with is, how to engage them [consumers]. But also as we work we have a specific program that we offer to get parents involved. But then we have stopped there and we need to offer training to parents to become involved with different levels.” (HRSA 8)*

*“I think that we try to do this [engage consumers as partners] and [...] we have done it. But I think - I actually think it’s hard to engage consumers in a big process in ways that are more than nominal.” (HRSA 2)*

### ***Theme 3 – Communication skills***

Communication also emerged as one of the most important skills domains. All informants described the ability to match communication to audiences and the

ability to communicate what MCH does as critical to achieving performance. Many MCH leaders articulated that the ability to communicate program outcomes, the ability to tell a story with data, and social media skills are essential communication competencies. Communication skills link closely with those in the above two themes, EBP and data analysis skills and the ability to align with partners and consumers. This suggests that communication is a crosscutting skill that should be incorporated into other skills domains. For example, one informant describes how data analysis should be coupled with the ability to effectively interpret and communicate what it says.

*“So I think if people had better communication skills and they were able to more accurately convey data that’s presented in a table that would have been a really good thing” (HRSA 3).*

Most informants also linked communication to partner alignment. The quotes below illustrate how, when dealing with various sectors, the workforce must be able to adeptly articulate MCH work.

*“So if you’re doing communication with the press. And how to package your message, you know - packaging your message in a different way that would get attention that way.” (HRSA 7)*

*“You need to be able to translate your health work, and particularly public health, into a language that business people understand. You know, they want, they want the number of widgets you’re making. But you don’t, the work isn’t going to result in quote un-quote, widgets. So how do you measure it and communicate it so that the business leadership of a health department or an executive branch of Government understands the value of why it’s important to do?” (HRSA 1)*

*“You have to be able to communicate with the consumer. You have to be able to communicate with the legislators. And you’re not going to communicate with those two different entities in the same way. So you have to be able to adjust your communication to fit your audience.” (HRSA 5)*

*“Each person has to be able to effectively communicate their ideas, their strategies, how you’re going to approach them, what are you going to do, information has to be relayed back in an effective manner. If you are releasing a report back to the general public it needs to be done on a level that can be understood by everyone. I think it’s probably the most important skill to have, really.” (HRSA 4)*

**Theme of research question two - Should the MCH workforce develop a set of core skills in order to address achieving all national performance measures or should the workforce foster essential skills according to each specific national performance measure?**

#### ***Theme 4 – Foundational skills are more important than measure-specific skills***

Almost all respondents indicated that, if they must choose, the workforce should have foundational skills instead of skills specific to each NPM. However, many informants considered both NPM-specific and foundational skills valuable to achieving performance. Rarely were skills specific to a particular NPM mentioned, except when used in examples. Most informants indicated that developing foundational skills is more appropriate than focusing on NPM-specific skills because foundational skills are applicable across measures as well as other areas of MCH work. Also, the workforce may work on many measures or their Title V programs may shift measures over the years. Some respondents indicated that developing a degree of expertise in a given measure would be valuable to performance. The workforce's ability to accomplish various tasks requires core skills that may transfer from one program or task to another. The following quotes from the data illustrate the importance of crosscutting skills in MCH work.

*"To me, I think it's more core skills. I feel like if you're having a workforce - you know, in [state/jurisdiction], specifically, you know, we don't necessarily have one person who's working on NPM 1, and one person who's working on NPM 4. You know, we sort of have a few staff that work crosscutting across multiple NPMs." (HRSA 7)*

*"I think it's more important to have the broader skills that you can apply. Because people are going, there'd be opportunities for advancement. And I think you can learn the specifics about tobacco versus newborn blood spot screening or tobacco and*

*bullying. But, you need to have those skills that can be applied across all of the performance measures.” (HRSA 1)*

*“I can see merit with both but I lean more towards a core set of skills. I think more towards a core set of skills so that the training that institutions across states are going to do is a little more inner-operable, it’s a little more interchangeable.” (HRSA 6)*

While many considered both approaches as important, a few informants recommended strongly against focusing on developing NPM-specific skills. The reasons given were that NPMs may change over time and an employee may change their program area. One informant from HRSA Region 10 insightfully perceived fostering NPM-specific skills to be less important than developing foundational skills because NPMs are susceptible to policy changes.

*“Everybody’s got to have the same baseline and then working from there because I think there’s a lot of intersections between the two and programs -- these NPM’s are only in place for five years and then they could potentially change again and I think it’s going to -- you’re going to create a workforce that’s too segmented and too siloed if we don’t have a core baseline of knowledge around MCH where you’ve got sort of this core education or core knowledge and then people can be moved across NPM’s much more flexibly.” (HRSA 10)*

### *Research Limitations*

Limitations are that the data were collected and analyzed by a single investigator. In addition, the sample size of the key informants is small. While each HRSA region is represented, the themes identified represent a portion of Title V leaders.

### **Discussion & Conclusion**

All skills identified in the themes are represented in the Council on Linkages domains of public health workforce competencies. Specifically, the themes link directly with the domains of analytical/assessment skills, community dimensions of practice, and communication skills, yet all three skills themes are crosscutting in implementing MCH work. By identifying themes, this study contributes to understanding workforce development content areas specific to MCH. The results from this study show that MCH leaders throughout the country consider evidence-based practice (EBP) and basic data analysis skills, the ability to align work with partners with special attention to consumers, and communication skills as critical to achieving performance measures. The study also determined that MCH leaders consider foundational skills to be more important than measure-specific skills.

Findings that EBP skills are perceived as critical agree with similar findings from a large-scale study on public health workforce needs that recommended investment in EBP training to address skills shortages<sup>12</sup>. A similar public health workforce training needs study also identified evidence-based decision-making as a skills gap<sup>13</sup>. The qualitative findings presented in this paper further the case that the



public health workforce, particularly the MCH workforce, need EBP skills. Training for MCH workforce professionals should include EBP.

Results from this study are applicable to the Public Health Accreditation Board's (PHAB) standards and measures. PHAB advances quality improvement of states/jurisdictions and local health departments and has created guidance for public health programs to ensure workforce competency. Title V offices are often housed in states/jurisdictions in which PHAB standards and measures apply. Because of this, PHAB standards and measures are becoming increasingly important to Title V work. For example, the ability to communicate what MCH does as a critical skill can be linked to PHAB domain 3 standard 3.2 'provide information on public health issues and public health functions through multiple methods to a variety of audiences<sup>14</sup>.' As the prevalence of accreditation in Title V offices increases, linking skills to accreditation standards could prove to be a fruitful task.

Study results can also be used to inform MCH workforce development and training content. From the study, EBP, basic data analysis, alignment with partners and consumers, and communication competencies were identified as imperative to MCH performance. Within these themes, skills gaps are: basic data analysis; using evidence-based strategies; engaging consumers; and communicating what MCH does. Training and workforce development should focus on these skills areas to assure a competent workforce. Also, the information gathered from this research suggests that Title V workforce development and training should focus more on

foundational skills than skills specific to MCHB measures. From entry-level to leadership positions, the MCH workforce must be equipped with the proper skills. Developing and training a competent workforce will lead to performance and outcomes that impact the population health of U.S. mothers and children.

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## APPENDIX 1

### Key Informant Interview Script

#### Introduction to interviewee:

The U.S. Maternal and child health workforce needs contemporary skills in order to achieve national MCH performance measures set out by the Maternal and Child Health Bureau (MCHB), particularly in light of the MCH Block Grant Transformation.

The purpose of this interview is to inform leaders and policymakers on skills and knowledge that MCH professionals are in most need of, as they relate to the MCHB National Performance Measures (NPMs). Your participation in this interview will provide information to guide future decisions about how to train the MCH workforce. Your identity and participation in this interview will be kept strictly confidential. Your state/jurisdiction will be identified by HRSA region, but neither you nor your individual state/jurisdiction will be identified in the report and analysis. Do you have any questions for me, before we begin? If not, I am going to begin asking you questions.

#### Demographic questions

For how many years have you been working in the field of MCH?

What is your current title?

1. From your experience with the MCH workforce in your state and throughout your career, can you tell me about what MCH workforce skills are important to achieve the new 15 NPMs?
2. The National MCH Workforce Development Center, which is a MCHB-funded workforce development center, has created a list of essential skills needed to achieve each of the new 15 MCHB National Performance Measures in eight categories. Specifically, the Center has described skills needed for each of the fifteen measures. For each measure, the Center's work group identified eight categories of skill sets. I am now going to ask you about each of these skills categories individually to get your thoughts about how important you think these skills categories are for achieving the NPMs.

2.1. The first skills category is **population health**. What do you think about population health as an essential MCH workforce skills category for achieving the NPMs?

Follow-up 2.1.a. What are specific skills that the MCH workforce should have related to population health?

Follow-up 2.1.b. For example, skills of effective data use to identify sub-groups of women and children disproportionately affected by an exposure or assessment, skills to examine whether evidence-based effective interventions are available, and the degree to which they are implemented with fidelity

Follow-up 2.1.b. If you do not think that this is an essential skills category, please explain why.

2.2. What do you think about **strategic planning and program design** as an essential MCH workforce skills category for achieving the NPMs?

Follow-up 2.2.a. What are specific skills that the MCH workforce should have related to strategic planning and program design?

Follow-up 2.2.b. For example, skills to integrate measure goals with other PH efforts or skills to contribute to research

Follow-up 2.2.c. If you do not think that this is an essential skills category, please explain why.

2.3. What do you think about **strategic alliances and effective partnerships** as an essential MCH workforce skills category for achieving the NPMs?

Follow-up 2.3.a. What are specific skills that the MCH workforce should have related to strategic alliances and effective partnerships?

Follow-up 2.3.b. For example, political expertise to be able to navigate sensitivities around a measure's topic

Follow-up 2.3.c. If you do not think that this is an essential skills category, please explain why.

2.4. What do you think about **consumer engagement** as an essential MCH workforce skills category for achieving the NPMs?

Follow-up 2.4.a. What are specific skills that the MCH workforce should have related to consumer engagement?

Follow-up 2.4.b. For example, skills to promote participatory with families or effectively engaging youth as peer educators

Follow-up 2.4.c. If you do not think that this is an essential skills category, please explain why.

2.5. What do you think about **policy and program implementation** as an essential MCH workforce skills category for achieving the NPMs?

Follow-up 2.5.a. What are specific skills that the MCH workforce should have related to policy and program implementation?

Follow-up 2.5.b. For example, skills to ensure health care providers have access to tools and best practices related to a measure

Follow-up 2.5.c. If you do not think that this is an essential skills category, please explain why.

2.6. What do you think about **communication** as an essential MCH workforce skills category for achieving the NPMs?

Follow-up 2.6.a. What are specific skills that the MCH workforce should have related to communication?

Follow-up 2.6.b. For example, the ability to reach a measure's target population with culturally appropriate messaging.

Follow-up 2.6.c. If you do not think that this is an essential skills category, please explain why.

2.7. What do you think about **advancing equity** as an essential MCH workforce skills category for achieving the NPMs?

Follow-up 2.7.a. What are specific skills that the MCH workforce should have related to advancing equity?

Follow-up 2.7.b. For example, the ability to analyze the equity related to access and treatment of a measure

Follow-up 2.7.c. If you do not think that this is an essential skills category, please explain why.

2.8. What do you think about **data-driven decision making** as an essential MCH workforce skills category for achieving the NPMs?

Follow-up 2.8.a. What are specific skills that the MCH workforce should have related to data-driven decision making?

Follow-up 2.8.b. For example, skills to review literature of a measure or the capacity to monitor prevalence of a measure using integrated data systems

Follow-up 2.8.c. If you do not think that this is an essential skills category, please explain why.

2.9. Apart from these skill categories related to the specific NPMs, what do you think are other foundational skills areas are for the MCH Workforce regarding the NPMs, that were not represented in the skills categories just mentioned?

3. MCH workforce skills can be understood as 'core skills' that are foundational to everyone in the workforce, but skills may also be tailored to fit each specific NPM. In your opinion, is it best for the MCH workforce to develop a set of core skills in order to address achieving all NPMs or should the workforce foster essential skills according to each NPM? For example, NPM 1, well-woman visits, would have its own set of workforce skills different from NPM 14,

tobacco cessation.

Follow-up 3. Please explain why you think so.

This is the end of the interview. Thank you again for your time. Do you have any questions for me, before we conclude?