MID PROJECT REPORT

Maternal Health
Learning & Innovation Center™

OCTOBER 2019 - APRIL 2022

Introduction

The United States is the only high-income country with an increasing maternal mortality rate.[1] There are stark racial, ethnic, and geographic disparities in adverse maternal health outcomes in the U.S. African American women experience a three to four-fold higher risk of dying from pregnancy-related complications than white women. Similarly, American Indian and Alaska Native women experience a two-fold higher risk of maternal mortality than white women. [2,3]

Recognition of this problem has led to recent funding of several local, state, and federal level maternal health initiatives, and significant resources have been dedicated to addressing maternal health system improvements. However, it is difficult to keep up with the growing resources that are essential for building on the work being done, compile new evidence for what works, and accelerate translation of effective strategies into practice. To help align and coordinate state and national efforts advancing maternal health outcomes, the Health Resources and Services Administration (HRSA) funded the Supporting Maternal Health Innovation program, which became the Maternal Health Learning and Innovation Center (MHLIC)[1]. MHLIC seeks to harness the momentum of the maternal health movement and support a continuum of learning, accessible resources, and partnership opportunities. MHLIC encourages efficient use of maternal health resources and facilitates programmatic and policy change toward our goals of improving maternal health and eliminating inequities.

This report provides an overview of the MHLIC, summarizes progress over the first 2.5 years of our 5-year project, and briefly describes our next steps.

[1] This project is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant number U7CMC33636 State Maternal Health Innovation Support and Implementation Program Cooperative Agreement. This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS, or the U.S. Government.

Overview of MHLIC

Launched in October 2019, the Maternal Health Learning and Innovation Center (MHLIC) is a collaboration among organizations dedicated to improving maternal health and maternal health equity through capacity building, fostering collaboration, and curating a rich resource repository. Our team is comprised of seven partners with expertise in maternal health, policy, innovation, engagement, and implementation. The MHLIC team includes: American College of Obstetricians and Gynecologists (ACOG), Association of Maternal and Child Health Programs (AMCHP), Georgia Health Policy Center, Ph Solutions, R.A.C.E. for Equity, and Reaching Our Sisters Everywhere (ROSE), led by a trio of University of North Carolina schools: Social Work, Medicine, and Gillings School of Global Public Health.

MHLIC Partner Organizations

The American College of Obstetricians and Gynecologists (ACOG) is dedicated to the advancement of women's health care and the professional and socioeconomic interests of its members through continuing medical education, practice, research, and advocacy. ACOG leads national work to address maternal morbidity and mortality through the Alliance for Innovation on Maternal Health program (AIM). The College contributes to the MHLIC by serving as a liaison to state AIM project work and by supporting MHLIC working groups as subject matter experts. In addition to subject-matter expertise, ACOG provides cross promotion of resources and learning opportunities for AIM tea ms and MHI and RMOMs award recipients.

The Association of Maternal & Child Health Programs (AMCHP) liaises with state and organizational maternal and child health public health leaders, and the Association contributes subject matter expertise to the MHLIC related to implementation of innovations and state and community maternal health emerging practices. Nationally, they lead and support programs to protect and promote the optimal health of women, children, youth, families, and communities. AMCHP's members include leaders from the highest levels of state government, such as directors of maternal and child health and children with special health care needs programs, as well as family leaders, community-based organizations, academic institutions, and others who partner with and support state maternal and child health programs. AMCHP supports its members and the broader public health community by disseminating best practices; advocating on their behalf in Washington; providing technical assistance; convening leaders to share experiences and ideas; and advising states about involving partners to reach their common goal of healthy children, families, and communities.

The Georgia Health Policy Center (GHPC)'s mission is to "integrate research, policy and programs to advance health and well-being." Its work connects decision-makers with the objective research and guidance needed to make informed decisions about health policy, financing, and program implementation. Housed within the Andrew Young School of Policy Studies at Georgia State University, the Georgia Health Policy Center (GHPC) draws upon its collective experience from more than 1,000 projects completed for hundreds of national, state, local, public, and private clients and work in more than 1,100 communities across the country. The GHPC offers a wide-range of evidence-based qualitative and quantitative research, evaluation, and translation services, as well as technical assistance to communities and decision makers. With more than two decades of experience, the GHPC is at work nationwide, focusing on solutions to some of the toughest issues facing health care today. GHPC staff provides seasoned leadership to the MHLIC's policy working group, subject matter expertise (SME) in policy analysis/engagement, social determinants of health equity, maternity care services in medically underserved communities, sustaining rural health network partnerships, public health financing innovations, and implementation coaching for Rural Maternity and Obstetrics Management (RMOMS) grantees.

Ph Solutions, LLC, is a small, woman-owned, public health consulting firm that aids businesses, communities, government agencies, and health care organizations in improving the overall health of the population. With a focus on assuring the quality of the health system, the company provides support with assessing needs, setting goals and objectives, planning activities, implementation and measuring outcomes. Ph Solutions, LLC supports MHLIC by providing capacity building support to grantees and coaches as a Program Awardee Liaison and through co-chairing the innovation support working group.

RACE for Equity equips organizational and community leaders who are working to engage community members in the development of results-based strategies that have measurable outcomes and advance health equity. RACE for Equity's work has included capacity building and direct support for leaders to implement data-driven decision making with Results Based Accountability (RBA). RACE for Equity contributes to the MHLIC by educating, training, and providing technical assistance to providers and policymakers to increase their knowledge and skills on data-driven decision-making and enhancing their service delivery with cultural humility for diverse populations. RACE for Equity also supports the development and dissemination of culturally relevant and inclusive materials and leads the MHLIC team through the intercultural development inventory by providing assessment and coaching.

Reaching Our Sisters Everywhere (ROSE) is a Georgia-based 501(c)3 nonprofit organization established to address breastfeeding inequities and disparities in the African American community. ROSE's initiatives have evolved to include improving access and reforming healthcare through culturally appropriate training and education for providers. The organization has connections to multiple communities of practice through MHLIC and shares the importance of this work and its implications for the health and wellbeing of Black, Brown and Indigenous women and their families. ROSE provides capacity building activities in the MHLIC related to culturally appropriate training, education, advocacy, and support among community stakeholders. ROSE also provides guidance on strategies to engage women and birthing people of color on the topics addressed by MHLIC.

The Department of Maternal and Child Health within the UNC Gillings School of Global Public Health administers the cooperative agreement for the Maternal Health Learning and Innovation Center. In partnership with the UNC School of Social Work and the UNC School of Medicine, the Department convenes collaborators, and staffs a "hub" of professionals to provide equity-centered training, technical assistance and resources for practitioners and advocates who are working to improve the lives of pregnant and parenting people in communities across the country.

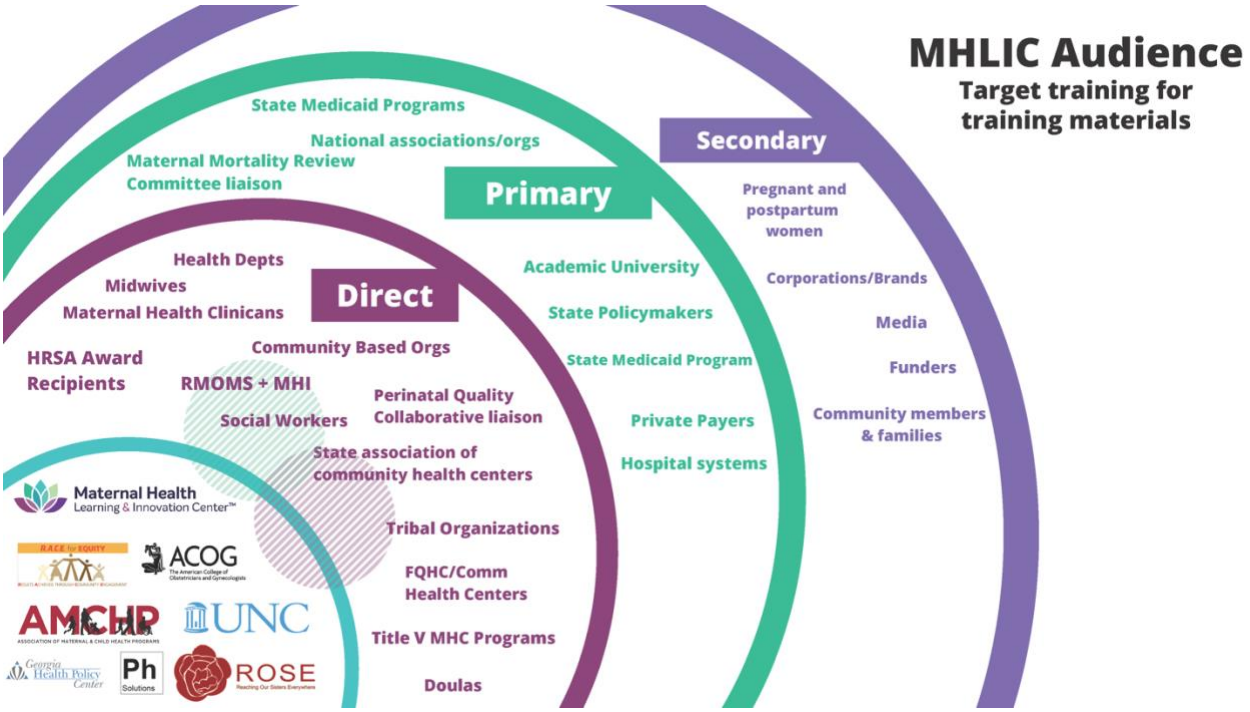
Our mission is to "foster collaboration and learning among diverse stakeholders to accelerate evidence-informed interventions advancing equitable maternal health outcomes through engagement, innovation, and policy." We do this by connecting maternal health learners with maternal health "doers" and develop, and share best practices related to maternal health improvement.

Our Audience and Charge

MHLIC is a national resource center with the central goal to provide a continuum of learning opportunities that enhance the capacity of all maternal health practitioners across the country. In 2019, along with MHLIC, HRSA also funded 9 State Maternal Health Innovation (MHI) projects and three Rural Maternity and Obstetrics Management (RMOMS) programs, which MHLIC is charged to support. Our two charges are to:

Figure 1. The key functions of MHLIC, highlighting equity at the center of our work.

1) Provide capacity building assistance (CBA) to recipients of the **State MHI Program** and the **RMOMS Program** to support implementation of innovative and evidence-informed strategies to address disparities in maternal health and reduce and prevent maternal mortality and severe maternal mortality; and
2) Establish a resource center that provides national guidance to improve maternal health and reduce maternal mortality and severe maternal morbidity (SMM) by offering technical assistance (TA), training, education, development and dissemination of resources, policy analysis and partnership building to **HRSA award recipients who focus on improving maternal health, states, and key stakeholders.**"



Most MHLIC resources (e.g., website, annual Symposium, webinars, technical assistance) are available to all maternal health stakeholders, with some MHLIC resources (e.g., Learning Institutes, limited trainings, and implementation coaching) available specifically for the State MHI and RMOMS programs.

Our three HRSA-defined program objectives are:

- By 2024, 75 percent of HRSA award recipients will access maternal health peer learning and shared resources created by the MHLIC.
- By 2024, 75 percent of HRSA award recipients who receive support and/or technical assistance to reduce maternal mortality and SMM will report they are better able to implement innovative and evidence-informed strategies to reduce and prevent maternal mortality and SMM.
- By 2024, increase the dissemination of national resources to support the adoption of the AIM and AIM – Community Care Initiative safety bundles, as well as other innovative, evidence-informed strategies to serve communities experiencing disparities that contribute to maternal mortality and SMM.

Equity

MHLIC is committed to centering equity in our work to improve maternal health, which we recognize as the mental, emotional, and physical wellbeing of individuals during pregnancy, childbirth, and the year following pregnancy. To improve outcomes for all, we commit to particularly focusing on efforts to support those who have been (and still are) historically marginalized and are consequently made most at risk for maternal mortality and morbidity: people who experience racism and those living in rural and frontier regions of the United States. Achieving maternal health equity is predicated on achieving racial, geographic and health equity. While recognizing that public health challenges result from a complex network of social, political, and economic factors, MHLIC focuses our resource creation, curation, and dissemination efforts on initiatives most closely related to maternal mortality and morbidity, particularly as they are exacerbated by racism and/or geographic access.

MHLIC exists to be a resource hub and learning center. True learning is reciprocal and based on mutual respect and trust. We strive to share power by being forthcoming and clear with objectives, spending time to examine our own biases, and positioning lived experience as authoritative. We recognize that the University of North Carolina at Chapel Hill, the lead funded agency of MHLIC, is a white-centered institution. As one mechanism for addressing this imbalance, MHLIC is intentional in partnering with organizations that are led by and serve people of color. MHLIC seeks to be a part of solutions. We have worked to operationalize equity in our internal practices, collaborations with partners, and services we provide. For example, we are tracking the percent of workplan activities that discuss equity in the product (e.g. webinar) and the percent that focus on maternal health equity. For Year 1, 75% of workplan activities

included at least a discussion of equity and 43% of them had a focus on health equity. In Year two, 98% of activities included discussion of equity, and 83% had a focus on health equity.

Stakeholder Engagement

To that end, MHLIC works to engage with stakeholders at multiple levels. In the first two years, we held or participated in 96 advisory meetings to support strategic planning, identify resource or training gaps, refine our evaluation approach, and strengthen our dissemination strategy. This includes routine collaboration and alignment calls with CDC, HRSA, AIM, AIM-CCI committee meetings, deBeaumont Foundation, as well as MHLIC-hosted "coffee chats" with stakeholders to listen to needs in maternal health, planning committees, and various other ad hoc advisory or collaborative calls. Collaboration and partnership with stakeholders, as well as our State MHI and RMOMS partners, continue to inform our services and resources and identify areas for improvement. We have established and strengthened relationships with many maternal health stakeholders and have aligned for future work together. In addition, many of our trainings were developed or hosted in response to feedback from an initial survey of stakeholders and the need expressed in a Baseline Learning Survey from State MHI and RMOMS teams in 2020.

We also involve stakeholders through our **Lived Experience Advisory Group (LEAG).** The LEAG is comprised of paid volunteers with experience as birthing persons and/or community doulas from communities that are most impacted by maternal health inequity. The LEAG works most closely with the evaluation team to provide guidance and feedback on evaluation surveys and resources. They also participate on working groups and event planning committees for events such as the National Maternal Health Innovation Symposium.

To read more about the creation and launch of MHLIC and our efforts to center equity, please see our publication, **Centering Equity and Developing the Maternal Health Workforce: Building the National Maternal Health Learning and Innovation Center**.

Evaluation

MHLIC uses evaluation and continuous reflection to improve our services and measure our progress toward the performance measures from HRSA. Our evaluation is guided by our three HRSA objectives noted above and the following evaluation questions:

1. To what extent has the MHLIC implemented activities and workplans as intended?
2. To what extent has the MHLIC provided effective capacity-building assistance(CBA) that centers equity to reduce severe maternal morbidity and mortality and maternal health inequities?
    a. To what extent are awardees or stakeholders applying the CBA in their strategies to reduce SMM and mortality and maternal health inequities?

3. To what extent has the MHLIC contributed to improved capacity among maternal health stakeholders to address health equity and implement innovations in maternal health.[2]
4. How effective is the MHLIC's national resource center at building the evidence repository and identifying and disseminating practices, policies, and tools to reduce SMM and mortality and maternal health inequities?

Baseline Survey

We began with a baseline learning survey in May 2020 of 43 State MHI and 15 RMOMS representatives to understand how to best meet their learning goals and used that to inform our services and training in the first two years. For example, this informed an increased emphasis on equity, specifically techniques to centering equity, and telehealth.

We repeated this learning survey at midline in May 2022 to assess how confidence in the teams' ability to address maternal health content areas has changed over time. We also conducted individual and small group interviews with recipients of technical assistance in 2021 and in-depth interviews with all State MHI and RMOMS awardees in 2022.

Midline Survey

The purpose of the midline learning survey was twofold: 1) to identify the awardees' strengths and gaps related to maternal health knowledge and skills to inform the training and technical assistance that MHLIC provides, and 2) measure any impact MHLIC's services may have had on awardees' capacity to address maternal health. The midline learning survey was sent in May 2022 to State MHI and RMOMS programs, with 73 staff (n=55 State MHI & 18 RMOMS) across all 12 programs having submitted responses. Responses to the midline survey were not linked to individual baseline responses, rather we compared each awardee team's confidence in their team's ability at baseline to their team's confidence at the midline.

There were no statistically significant increases in awardees' confidence in their team's ability across HRSA's designated maternal health content areas from baseline to midline (a 2 year period); however, qualitative responses indicate that MHLIC resources have supported their team's work and generally improved capacity. In addition, results offered learnings for planning during the remaining two and a half years of MHLIC's current funding. Results from the midline survey and in-depth interviews with all State MHI and RMOMS awardees are shared throughout this report and being used to adapt our services.

[2] This maps to the HRSA performance measure "percentage of award recipients who report they are better able to implement innovative and evidence-informed strategies to address MM and SMM."

Accomplishments

Overview of accomplishments

Over the past 2.5 years, MHLIC has reached 5,071 people through training events, peer learning opportunities, and our National Maternal Health Innovation Symposium. This includes hosting 26 webinars, including three virtual skills workshops reaching 1,892 people. MHLIC subject matter experts have responded to 106 technical assistance (TA) requests for needs such as on-going evaluation support, Medicaid policy information, and telehealth implementation. We provided 361 instances of coaching to State MHI and RMOMS programs. In the first half of year three, MHLIC was able to host its first in-person/hybrid event, launched a podcast series, and published our first peer-reviewed journal article.

Capacity Building Assistance

MHLIC capacity building assistance for State MHI and RMOMS is delivered through training, coaching, technical assistance, tailored consultations, and Learning Institutes, while the main avenues of capacity building among the broader audience is webinars, symposia, or TA requests submitted through the website. See side bar for HRSA's maternal health content areas on which MHLIC offers support.

Training. We have offered 26 webinars, ranging from a Telehealth in Practice Series, to health equity and racism in maternal health, to hands-on data visualization workshops and a virtual train-the-trainer simulation on obstetric emergency. See Appendix A for a list of MHLIC webinars and trainings. Attendance at our webinars has grown over time as our distribution list grows, with the most highly attended webinar being **Promising Partnerships to Address Maternal Mortality**, cohosted with HRSA in April 2022 with more than 300 attendees.

In the midline survey, training was ranked as the most popular out of all the MHLIC offerings (e.g., website, annual Symposium, webinars, technical assistance). Skills trainings tailored to the State MHI and RMOMS programs have included Data Visualization,

HRSA Maternal Health Content Areas

- Maternity care services in medically underserved communities
- Maternity care workforce shortages
- Postpartum care
- Patient and provider education and awareness related to maternal mortality and SMM
- State maternal mortality review committees
- Innovative and informed strategies to improve maternal health outcomes
- Use of data in designing and implementing innovative and evidence-informed strategies.
- Data collection and evaluation of innovative and evidence informed interventions and strategies
- Maternal telehealth and telemedicine strategies
- Other emerging issues identified by award recipients

Simulation, and Technology of Participation (TOP) trainings.

A participant from the data visualization training with Stephanie Evergreen noted that *"It was one of the best trainings that I've had on Zoom to be honest. It was facilitated, it was good communication from your side. It was a really great training."- MHI participant, in a qualitative interview*

A participant in the TOPS training indicated:

"I think [TOPS Training] really is a great example of training that I didn't really know that I needed but as soon as we got going with it, I think everybody there was like, 'We all needed this and our whole team needs this.'" - MHI participant, in a qualitative interview

Coaching. During the first 2.5 years all State MHI and RMOMS teams received coaching from an MHLIC coach whose role is to support teams in implementing their innovations, connect teams to resources and other experts, troubleshoot challenges, and highlight MHLIC offerings. MHLIC has provided 361 instances of tailored coaching to 12 HRSA-funded collaborating partners in 9 states and 3 rural regions. Coach interactions are typically virtual and last for approximately one hour.

In the midline survey, coaching was ranked by the State MHI and RMOMS programs as the second most valuable MHLIC resource after training. Participants shared examples of how their coach had been helpful, which included strategic plan development, connections with peers, navigating new resources such as AIM bundles, and engaging stakeholders and community partners. Coaching was frequently cited as a highlight of working with MHLIC during the midline survey and interviews, with one recipient sharing the example that "when HRSA returned our Year 1 strategic plan, our coach met with us, provided feedback and guidance on ways to restructure our plan and rewrite our response for clarity."

During qualitative interviews, coaching again and again was noted as one of the most valuable aspects of support from MHLIC. Eleven out of twelve awardees reported that the coaching was worthwhile and beneficial; only one awardee felt that the coaching was not meeting their specific needs. Coaches serve many roles, including mediator, cheerleader, and confidence-builder as the following quotes display.

"[Our coach was] accessible and available, and always willing to kind of give us what we need, even if we didn't know what we needed at the time."– MHI participant, in a qualitative interview

"[Our coach is] a great resource for the program... But she's also a great colleague and someone we can all reach out to and, you know, she's working with us to facilitate meetings and technical assistance. And she's always... sending us the right people for the questions that we have." – MHI participant, in a qualitative interview

"No matter what we needed, what it was, what we were looking for, [our coach] would jump in and try to get us the resources herself, connect us with the right people, whatever it was she could do to help." – MHI participant, in a qualitative interview

"I was like 'How am I ever gonna come up with what I need?' And in talking to our coach, she connected me to some other states that...had kind of a similar issue" – MHI participant, in a qualitative interview

"[Our coaches have] been great and I think one of the most important things that they bring is they truly understand what we are trying to do here. They really understand it and I think they really have helped us articulate what we're doing and why this program is so important." – RMOMS participant, in a qualitative interview

Awardees reported that coaches support relationships with Project Officers.

"[Our coach] is able to put [our feedback from HRSA] into steps and frame it in a conversation that supports what we're doing, boosts up the positive things we're doing and then helps me structure support for those areas that we're weak in." – RMOMS participant, in a qualitative interview

Eight of the twelve teams wanted a better orientation to what coaches can offer.

"I don't know if there were suggested ways in which a coach could have helped 'cause sometimes it's like you don't know what you don't know." – MHI participant, in qualitative interview

"I think having some sort of like menu or like examples of how teams have received support and what types of technical assistance were available 'cause it was sort of hard to imagine something that I hadn't ever had or seen before." – MHI participant, in a qualitative interview

As part of coaching, each State MHI or RMOMS team is offered an opportunity for an annual "Tailored Consultation" which was envisioned to be on-site, intensive coaching or TA on a specific top area or challenge the team was facing. Due to COVID-19, these occurred virtually in the first two years. Tailored consultations were requested by 5 teams in Year 1 and 6 teams in Year 2, with one in-person tailored consultation scheduled for Year 3.

Technical Assistance. Technical Assistance (TA) is available to State MHI and RMOMS, usually brokered through their coach, and to external stakeholders who submit requests through our website. TA for external audiences has ranged from a journalist interested in learning more about innovative maternal healthcare solutions during COVID-19 to extended evaluation support for a newly formed maternal health organization. When a TA request is received, MHLIC identifies a subject matter expert within the Center to provide assistance and connects them with the requesting team, individual or agency. To fulfill requests, the subject matter expert may provide expertise via one or more sessions. Alternatively, they may curate existing resources, create a new resource, or provide connections to other organizations or partners. Since

we began accepting TA requests in early 2020, we have responded to 106 requests, 98 of which were for State MHI or RMOMS recipients, and 8 for external stakeholders.

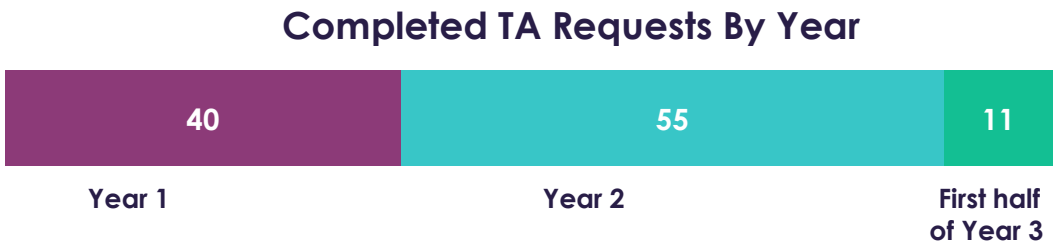


Figure 2. Number of Completed Technical Assistance (TA) Requests by Year

In summer 2021, we conducted an evaluation of our TA services. Evaluation results indicated that recipients overwhelmingly appreciated the support and found it useful, and illuminated ways that we can continue to refine and improve our processes.

Themes that arose from the interviews included high satisfaction with MHLIC subject matter experts that responded to the TA request, with every interviewee indicating they gained knowledge or new skills because of the TA they received. Many interviewees were also able to cite concrete examples of how they were able to apply the TA and share how it advanced their capacity and relationships within their own organizations. For example, one TA recipient indicated MHLIC contributed to a significant increase in traffic to a newly launched consultation line that had previously received low numbers of requests. Awardees also had the opportunity to give feedback on technical assistance services received during the midline survey and midline interviews.

When asked about the most helpful aspect of working with MHLIC, an RMOMS recipient shared that "[a technical assistance provider] with very specialized knowledge base in Medicaid actually helped us generate a report where we were trying to compare [our state] Medicaid with our neighboring states. So for me personally, access to content experts [has been the most helpful aspect]."

"MHLIC does an excellent job responding to capacity building and technical assistance requests... I appreciate the blend of learning from experts and peers." – MHI participant, on the midline survey

"I personally learned that, you know, it is possible for one center to offer TA for an entire country, which I didn't think it was possible in the beginning." – MHI participant, in a qualitative interview

Based on the evaluation, we also identified four opportunities to improve our TA services: 1) use positive feedback as promotional material, 2) clarify TA description and

processes, 3) develop a more structured TA close-out process, and 4) institute a post-TA evaluation survey for recipients. We have begun implementing these recommendations and are continuing to refine the TA process. Furthermore, we are refining our services to support a smaller number of more intensive and adaptive assistance requests for external stakeholders.

Learning Institutes. MHLIC Learning Institutes, or LIs, are an annual event for State MHI and RMOMS awardees to focus on learning and application of new knowledge and skills specific to awardee contexts, engage in peer-learning across awardees, and discuss emerging issues and action planning. We hosted two LIs in Year 1, and one in each subsequent year for a total of four. There were 166 total attendees in Year 1, 128 in Year 2, and 149 in Year 3. The Year 2 LI was focused on equity skills in partnership with the National Maternal and Child Health Workforce Development Center and Human Impact Partners. LIs have been a premier event for State MHI and RMOMS teams to connect to each other virtually, with our first in-person hybrid LI occurring in April 2022. Learning Institute evaluation results indicate respondents find the sessions to be a good use of their time, relevant to their needs, and frequently report their intention to apply their new learning.

From event evaluations, on average 93% of respondents from the 2020 and 2021 LIs report it was a good use of time, and 96% of respondents reported that the LI provided them with content relevant to their specific needs. After the April 2022 LI, 96% of attendees reported that it was an effective way to participate in peer learning. Open text responses on event evaluations from participants include:

"Sharing between peers felt natural and welcoming" – September 2020 LI attendee

"I thought the attendance size for the in-person meeting was great, it was small enough to actually re-engage with the same people multiple times throughout the event. I also thought it was a good blend of presentations and discussions." – 2022 LI attendee

Evaluations results are used by the training team and planning committees to inform subsequent LIs and to better tailor our events to awardees.

Peer Learning. In addition to Learning Institutes, MHLIC has created a variety of peer learning opportunities, such as communities of practice (CoP), "office hour" discussions, or individual connections between State MHI or RMOMS teams. There are two ongoing communities of practice – a Measurement CoP for the State MHI programs, and a quarterly RMOMS CoP to discuss geographic equity and engagement – as well as a time-limited Provider and Community Engagement CoP. These CoPs provide an opportunity for participants to discuss, learn, and share resources, challenges, and ideas with peers they may not otherwise interact with, as the following quote displays about the Measurement CoP.

"So that's been really great, just the content that has been presented but also just the peer learning and peer sharing space that's created by the community of practice." – State MHI Data Manager and Evaluator in a qualitative interview, about the Measurement CoP

"Our simulation team was all set to go out and you know we purchased the van and high-fidelity equipment and then COVID happened. So [another MHI team] presented on virtually doing simulations and so our MHLIC coach linked [our team] to the team [that presented] and they worked then on providing virtual simulation." – MHI participant, in a qualitative interview

In addition, MHLIC holds office hours and peer learning opportunities on an as-needed basis. These offer an open opportunity for State MHI or RMOMS team members to discuss a range of issues, often related to a recent webinar or upcoming task (e.g., discussion of telehealth webinars or upcoming strategic plan documents). To date, MHLIC has offered 17 office hours and peer learning sessions reaching between 4 and 92 participants at each meeting, with 592 non-unique individuals across all sessions.

In the midline assessment, all twelve State MHI and RMOMS teams reported connecting with another State MHI or RMOMS program, with a median of 3 connections made since baseline (over a two year period). **Learning from other state teams has been particularly impactful.**

""The most useful thing from my perspective is to foster opportunities for states to share what they are working on and connect different teams so we can build off each other's work." - MHI participant, on the midline survey.

Popular Symposia Sessions in 2021

- Conversational Capacity: A Simple Communication Technique to Improve Conversations and Deepen Understanding
- Careers in Maternal Health
- Prioritizing Mental Health to Better Serve Black Mothers
- Engaging a Lived Experience Advisory Group in a Maternal Telehealth Program Evaluation
- A Focus on Indigenous Birth Work
- Male Engagement to Improve MCH

National Maternal Health Innovation Symposium. In 2020, MHLIC held its first annual National Maternal Health Innovation Symposium (NMHIS), which is a free national event open to the public. The NMHIS was held virtually in Year 1 and Year 2, with 649 and 854 participants respectively. Keynote speakers have included Loretta Ross, Wanda Irving, and Sonya Renee Taylor, with workshops on a variety of topics. Examples include Improving the Quality and Expanding the Delivery of Warning Signs Education for Pregnant and Postpartum Patients and their Families, and Social Determinants of Health in Perinatal Care: Leading with resources. See side bar for a list of some of the most popular Symposia sessions from the first year. Evaluation data indicated the symposia were valuable to attendees, offering them tangible skills, and that they would be likely to return in future years. Some of the most popular elements of the symposia have been keynote speakers, panel discussions, and spark sessions (short videos sharing innovations in maternal health), with one participant saying they were "thinking about how to start my own 'spark' using the inspiration found here."

Attendee satisfaction was high in the first two symposia (2021 and 2022). Of the evaluation respondents for the first two symposia, **95%** agreed or strongly agreed that "The Symposium provided [them] with content relevant to [their] specific needs." Similarly, **94%** of respondents agreed or strongly agreed that the Symposium was a good use of their time.

*"Many symposia these days are death by PowerPoint. I appreciated that this one was more **conversational**. I loved that the focus was largely on racial inequities and that **people with lived experience were given space to tell their stories**." – 2020 Symposium evaluation survey respondent*

Capacity-building summary. Overall, in qualitative interviews asking about the **quality** of our capacity-building assistance, teams appreciated the breadth of resources offered as well as the feedback and follow-through from Center staff.

"I feel like I've gotten both like that content support of what's going on in maternal health... plus that additional kind of more support around managing people and the process of what we're doing too." – MHI participant, in a qualitative interview

Teams also appreciated the follow-through from coaches and technical assistance experts attached to the Center.

"I do perceive the center as well-organized, you know following through on what it says it will, you know having good links to content and things like that that actually work. So especially in terms of a new center that's just been developed and actualized, it seems like it's very well-run." – RMOMS participant, in a qualitative interview

When discussing the **impact** of our capacity-building assistance, teams noted that they gained both knowledge and skills. The main skills gained include: meeting facilitation, leading teams, incorporating equity, and data visualization and sharing. One state noted that they brought racial equity work into other facets of their work even outside the MHI grant. They used MHLIC as a guide for how to have those conversations. Other states shared that:

"[Centering equity has] been a primary push and experience that I've had from MHLIC." – RMOMS participant in qualitative interview

[MHLIC has provided support by] "helping us set the tone and starting the conversations about what equity looks like in all aspects of our healthcare system for our state" – MHI participant, in a qualitative interview

"I feel kind of like with the equity work, - I've been presented with a buffet of options of ways to angle up, you know, to take that approach. Like, do you do a data-driven presentation, do you to focus on history, do you focus on empathy, do you focus on safety? You know, like all these different angles to try to get the message across and different modalities of delivering it and I think that it's been helpful from MHLIC to see some of those you know." – MHI participant, in a qualitative interview

"I think that the fact that MHLIC seems to be intentionally center equity and center in the way even that you call for proposals and things like that, center it in the way that you asked us to present on things and think critically about our own work has been helpful in just constant refocusing. " – MHI participant, in a qualitative interview

Dissemination

National Resource Center

One of the primary goals of MHLIC is to host a comprehensive evidence repository for maternal health best practices, policies, and tools to reduce SMM and maternal mortality and inequities. During Year 1, the MHLIC team and subject matter experts across the project compiled existing resources, innovations, and evidence informed strategies to share in our resource center.

The resource center, found at **maternalhealthlearning.org**, formally launched in January 2021 with 115 resources, and has increased to 233 resources as of April 2022. These resources represent a variety of categories, including policy analysis papers, campaigns, fact sheets, journal articles, modules, podcasts, reports, toolkits, webinars, and other website/information hubs. MHLIC has created 72 unique resources for its own resource center, in the form of webinars, fact sheets, and Spark Sessions from our NMHIS. The figure below shows the monthly website figures for the first half of Year 3 which has grown over time.

Figure 4. Number of Website Visitors each Month over the first half of Year 3

In addition to our website, we distribute a bimonthly national newsletter to more than 3,900 subscribers, and a biweekly memo specifically for State MHI and RMOMS programs which reaches 244 people with information relevant to their projects. MHLIC's **YouTube channel** has 203 public and unlisted videos with 129,176 views where 137 subscribers have watched more than 4,200 hours of MHLIC content, including recorded sessions from previous National Maternal Health Innovation Symposia, webinars, and other trainings. See **Appendix C** for a full list of the 64 public YouTube videos.

MHLIC also uses LinkedIn, Twitter, and Facebook to engage with maternal health practitioners and guide them to the Resource Center and other MHLIC learning opportunities. More recently we started an Instagram in December 2021. As of April 2022, MHLIC reached 455 users on Instagram. Over the first half of Year 3, we had the greatest reach on Facebook, with a peak in October 2021 due to podcast advertising and paid impressions. Twitter and LinkedIn impressions are generally trending upward over time.

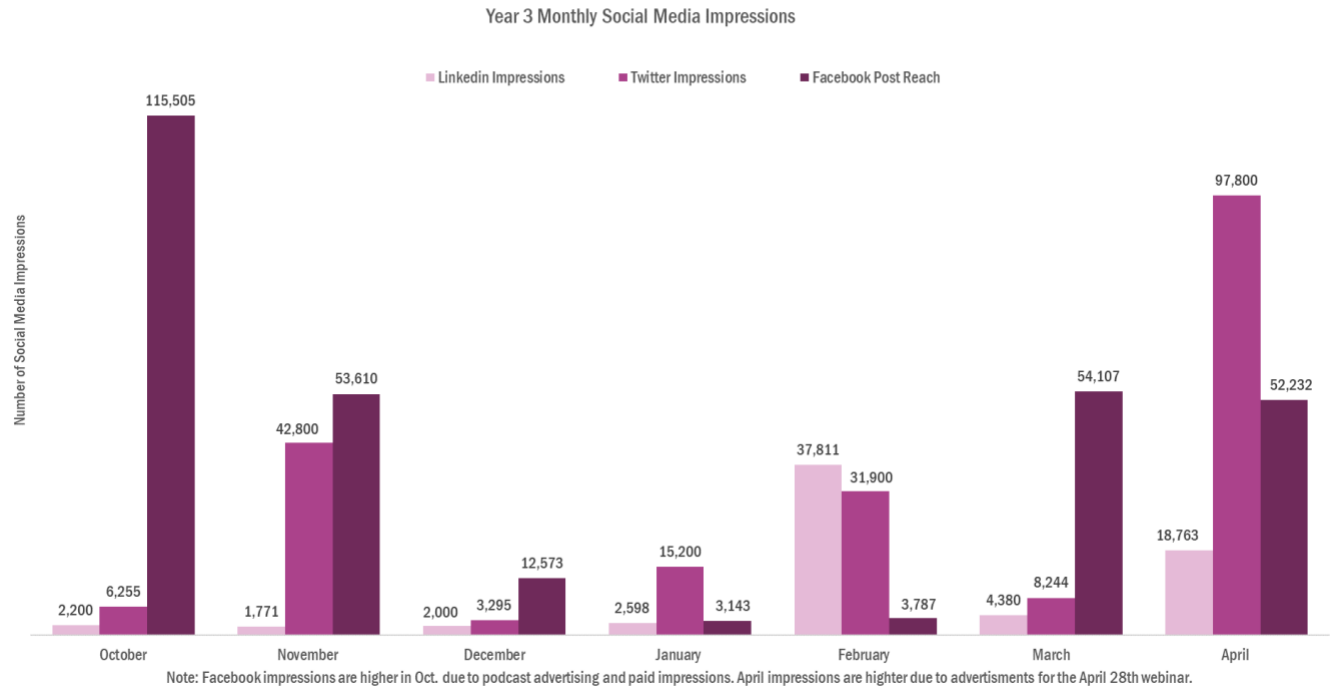


Figure 5. Number of Social Media Impressions each Month over the first half of Year 3

Additional Dissemination Approaches

We value creating a range of resources to reach diverse audiences using a variety of media and formats. In Year 2, we hosted **Innovation Thursdays**, a series of webinars to explore innovations in maternal health and maternal health equity, and a **Leadership Series** -- virtual conversations featuring practical tips and inspiration from maternal health and public health leaders about how they have moved initiatives forward. Our **podcast series,** launched in Year 3 and continuing into Year 4, consists of a wide range of virtual hosts and expert guests discussing ways practitioners in the field can better serve women and birthing people and advance maternal health equity. Many MHLIC team members participated as authors in the Practical Playbook III on Maternal Health, which will be released in the Spring of 2023.

MHLIC has shared our work at conferences, both internal (Learning Institutes and Symposia) and external (City MatCH, AMCHP, APHA). In the first 2.5 years, MHLIC has given 7 presentations at academic and practice conferences.

Collaboration with Alliance for Innovation on Maternal Health (AIM) and AIM-Community Care Initiative (CCI)

In 2014, HRSA awarded the American College of Obstetricians and Gynecologists (ACOG) a cooperative agreement to implement the Alliance for Innovation on Maternal Health (AIM) program. AIM is a national data-driven maternal safety and quality improvement initiative based on proven implementation approaches to improving maternal safety and outcomes in the U.S. AIM works through state teams and health systems to align national, state, and hospital level quality improvement efforts to improve overall maternal health outcomes. Any U.S. hospital in a participating AIM state or hospital system can join the AIM community. AIM's strategies include patient safety bundles and tools. **https://saferbirth.org/**

In 2019, HRSA awarded the National Healthy Start Association (NHSA) with a cooperative agreement for a five-year project focused on improving maternal health outcomes across the United States. This program would become the Alliance for Innovation on Maternal Health Community Care Initiative (AIM CCI). AIM CCI's goal is to reduce maternal mortality and morbidity through the development and implementation of non-hospital focused maternal safety bundles across community and outpatient settings. **https://www.aimcci.org**

As part of our HRSA charges, MHLIC has a special focus on collaboration and dissemination of AIM and AIM-CCI efforts. ACOG partners participate in MHLIC's engagement, policy, and innovation support working group meetings. They provide insight on information related to AIM and other relevant ACOG events to MHLIC and MHI states. These ACOG MHLIC partners also share MHLIC events and announcements with AIM states and their networks. The AIM Program Manager Liaison for the MHLIC also provides support and guidance on clinical bundle implementation and data upon request or as needed in meetings. Staff from MHLIC also serve on three different AIM-CCI committees, providing support on safety bundles, equity, and metrics. MHLIC is poised to support dissemination of the first AIM-CCI community bundle through our resource center, newsletter and social media channels, as well as through Year 4 Learning Institutes and Symposia. Our communication staff meet regularly with AIM and AIM-CCI communication staff to brainstorm joint promotional campaigns.

"How are we doing?"

In reflecting back on our three HRSA objectives, MHLIC is on track to meet its objectives.

1. By 2024, 75 percent of HRSA award recipients will access maternal health peer learning and shared resources created by the MHLIC.

We have already met this objective, with 100% of HRSA award recipients accessing our peer learning and resources, including representation from all State MHI and RMOMS teams at our annual Learning Institutes thus far. The newsletter, website, webinars and symposium are the most accessed resources, according to our midline survey.

2. By 2024, 75 percent of HRSA award recipients who receive support and/or technical assistance to reduce maternal mortality and SMM will report they are better able to implement innovative and evidence-informed strategies to reduce and prevent maternal mortality and SMM.

We are seeing progress toward HRSA objective two as well, with multiple states expressing an improved ability to implement innovations during qualitative interviews. Quantitative results from the midline survey did not show statistically significant increases in levels of confidence in their teams' ability to address maternal health content areas from baseline to midline; however, we note limitations in part due to over-estimated confidence at baseline and the COVID-19 pandemic which compounded implementation challenges. When we specifically compare each state from baseline to midline we see that half of awardee teams increase, though non-significantly, on the measure assessing their confidence in their team's ability to "implement innovative and evidence-informed interventions and strategies to improve maternal health outcomes". We will measure confidence levels and self-reported improvement in implementing innovations at the end of the funding period and anticipate seeing greater increases at that time.

3. By 2024, increase the dissemination of national resources to support the adoption of the AIM and AIM – Community Care Initiative safety bundles, as well as other innovative, evidence-informed strategies to serve communities experiencing disparities that contribute to maternal mortality and SMM.

Objective three has also been met with the launch of our National Resource Center in Year 2, which now includes 233 resources. Regular collaborative meetings with ACOG's AIM staff and committee meetings with AIM-CCI also position us to support dissemination efforts of new bundles as they are published. We will continue to increase the dissemination of resources, innovations, and AIM/AIM-CCI initiatives in the next two years.

Takeaways and Recommendations

Overall, midline survey results indicate that MHLIC is a "value add" for MHI and RMOMS initiatives around the country.

"I think that the concept of having a centralized source for technical assistance in a grant such as this where there's multiple grantees across multiple states who are doing largely aligned work, I think is really smart and very beneficial." – MHI participant, in a qualitative interview

Awardees continually report high quality and accessible content and support.

"I feel that what you provide is high-quality. I think there's a lot of intentionality, and when you put things together ... and I think everyone is so pleasant, which kind of shows that there is really a passion towards what you're doing. And you really want to see the state succeed and provide us with what we need, and so I do feel that that's palpable."- MHI participant, in a qualitative interview

The Center has met two of its three objectives and is turning its attention in Years 4 and 5 toward building capacity-building opportunities for the MHI and RMOMS teams to go deeper in their skills development.

For the broader national audience of maternal health practitioners, MHLIC has curated an extensive catalogue of innovations and best practices in its Resource Center, and the Center has provided significant learning opportunities to the field through the annual symposium and public webinars.

Midline survey results offered several areas to emphasize during the remaining two and a half years of MHLIC's current funding.

- The most common knowledge gaps that awardees would like to fill in the next two years are **data management and infrastructure** (i.e., Improving informatics infrastructures, and dissemination tools), **cross-state sharing, implementation support, and equity**.
- Awardees requested assistance from the MHLIC on **meaningfully engaging nontraditional collaborators, including people with lived experience and community partners who can advocate for policy changes**. Some states felt strong in this area and could be well positioned to provide peer support sharing how they have involved people with lived experience in their work.

Qualitative interview results reinforced the value of coaching and peer learning for RMOMS and State MHI awardees and offered opportunities to improve support to future cohorts of awardees including:

- Orienting new awardees to the role of the MHLIC coach and how the coach can help to broker MHLIC resources so that awardees can fully take advantage of the many MHLIC resources.
- Understanding RMOMS and State MHI innovations from the very beginning so that connections to awardees who are implementing similar innovations can be made earlier, while they are trying to get their innovations off the ground.
- Forming a better connection between AIM and the State MHI projects sooner.
- Being mindful of requirements and deadlines from the funder when planning training and peer learning events, and when requesting an awardee to provide support to peer State MHI or RMOMS team or to the MHLIC
- Aligning the training and TA opportunities with the innovations that awardees are implementing to make sure that MHLIC offerings reflect the needs of all awardees, such as offering more competency-based skills trainings to transform systems.

Next Steps

In the next 2 years, MHLIC will continue to develop resources, curate and disseminate innovations, elevate the work of maternal health partners, and provide high quality technical assistance to stakeholders. We will also continue striving to maintain our focus on equity in the support we provide and resources we develop, and in interactions with each other. As a new center and a learning organization, we understand the importance of integrating evaluation and learning into our ongoing work to improve our processes, products, and partnerships.

In the upcoming year, MHLIC will build upon the current foundation by adding support for the newly funded RMOMS and State MHI teams for a total of 10 RMOMS and 18 State MHI awardees. Training and TA will include deeper skill-building and more competency-based learning that is urgently needed to transform systems. We will prioritize enhancing our dissemination and knowledge management so that we can be an effective purveyor of information about maternal health innovations happening across the country. The Practical Playbook will be a major way that we are disseminating what's working and lessons learned nationally, highlighting the latest maternal health work at the community and state level that will be available open access. We will also support dissemination of the recently released **Maternal Health Blueprint.** As a learning center, we will continue to translate what we are learning into the field as rapidly as possible so that we can see preventable deaths among pregnant and birthing people decline, especially for those populations disproportionately impacted by this devastating maternal health crisis.

Appendix A: List of Webinars and Trainings Held

We have offered 26 trainings and webinars in the first 2.5 years, ranging from a Telehealth in Practice Series, Engagement series, to hands-on data visualization workshops and a virtual train-the-trainer simulation on obstetric emergency. This list does not include skills sessions developed by the MHLIC for Learning Institutes or the Symposia.

1. Coming Face to Face with my Biased Self
2. Listening to Understand and Not to Respond Across Different Cultural Contexts
3. Cultural Humility and Black Maternal Health in a Historical Context
4. Telehealth in Practice: Arkansas High Risk Pregnancy Program
5. Telehealth in Practice: Lana'i Community Health Center
6. Advancing Equity in our Work
7. Maternal Health and the Four Fears of COVID
8. Reviewing Policies for Equity Impact: A Tool to Support Equitable Maternal Health Outcomes
9. Considering Data: Opportunities for Representation, Inclusion, and Respectful Translation
10. Doulas: Supporting Models that Support Families
11. Leadership Series- Miriam Perez
12. Leadership Series- Regina Benjamin
13. Leadership Series- Abigail Echo-Hawk
14. Innovation Thursdays: Radical Health, Ivelyse Andina
15. Innovation Thursdays: The Shades of Blue Project, Kay Matthews
16. Innovation Thursdays: Perinatal Equity Foundation, Nastassia Davis
17. Innovation Thursdays: Health in her Hue, Ashlee Wisdom
18. Innovation Thursdays: Boober/Birth Day Presence, Jada Shapiro
19. Innovation Thursdays: Canopie, Anne Wanlund
20. Innovation Thursdays: The Eudaimonia Center, Dr. Laurena White
21. Data Visualization with Stephanie Evergreen
22. Simulation Training
23. Technology of Participation Facilitation and Strategic Planning

24. A National Call to Action: How Focusing on Perinatal Mental Health will Improve the Health and Well-Being of Mothers, Babies, Families, and Communities

25. Promising Partnerships to Address Maternal Mortality

26. Reproductive Wellness for Women with Chronic Conditions

Appendix B: List of All Resources in the National Resource Center

Appendix C: List of All Public YouTube Videos on MHLIC's Channel

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[1] Collaborators GBDMM. Global, regional, and national levels of maternal mortality, 1990-2015: A systematic analysis for the Global Burden of Disease Study 2015. *Lancet.*2016;388(10053):1775- 1812.

[2] Singh GK. Maternal Mortality in the United States, 1935-2007: Substantial Racial/Ethnic, Socioeconomic, and Geographic Disparities Persist. A 75th Anniversary Publication. Health Resources and Services Administration, Maternal and Child Health Bureau. Rockville, Maryland: U.S. Department of Health and Human Services; 2010. This publication is available online at http://www.mchb.hrsa.gov/

[3] Center for Disease Control and Prevention. Racial/Ethnic Disparities in Pregnancy-Related Deaths — United States, 2007–2016. Accessed July 24, 2020. **https://www.cdc.gov/reproductivehealth/maternal-mortality/disparities-pregnancy-related-deaths/infographic.html**