Introducing:
The Severe Maternal
Morbidity Toolkit

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BACKGROUND: MATERNAL HEALTH INEQUITIES

Maternal health and well-being are critical public health concerns in New York City (NYC). Deaths related to pregnancy and childbirth have fallen in NYC, yet profound inequities remain: During the period 2011–2015, Black non-Latina (Black) women[a] had an eight times greater risk of pregnancy-related death (or maternal death) than did White non-Latina (White) women. Latinas and other women of color were also at much higher risk of maternal death when compared with their White counterparts.[1]

For each maternal death, approximately 100 women will suffer from severe maternal morbidity (SMM)—a life-threatening event during or after childbirth. Examples of SMM include heavy bleeding, blood clots, kidney failure, stroke, or heart attack. SMM increased by 34% in NYC from 2008 to 2014 and affects approximately 2,500 to 3,000 NYC women each year.[2] Black women in NYC are about three times more likely to experience SMM than are White women, exemplifying the inequity and hardship experienced by this community.

Research from a variety of disciplines demonstrates that the pervasive stress of racism (a system of interlocking structures at the societal, institutional, and interpersonal levels that confer privilege or disadvantage)[3] within communities of color, coupled with longstanding and intentional disinvestment in these communities (including redlining,[4] predatory housing policies,[5] and unequal funding for schools[6] and hospitals[7]) are the root causes of these and other health inequities. Activists from the sexual and reproductive justice movement (led by Black women since the 1990s) have pushed the health community to address persistent and profound disparities in maternal health and well-being. Members of the sexual and reproductive justice movement locally have helped to increase public understanding of this issue and have driven the NYC mass media to cover several high-profile maternal deaths. There is a growing recognition that both clinical and community action are needed to prevent maternal complications and deaths.

OVERVIEW AND PURPOSE:
SEVERE MATERNAL MORBIDITY PROJECT TOOLKIT

In 2017, the NYC Department of Mental Health and Hygiene (NYC Health Department), in collaboration with the Fund for Public Health in New York City, received a grant from Merck for Mothers to implement the "Reducing Inequities and Disparities in Preventable Severe Maternal Morbidity in New York City Project (referred to throughout this publication as the SMM Project)." Between 2017 and 2020, this Project worked with clinical and community partners to improve maternal outcomes, promote health equity, and reduce racial/ethnic disparities in SMM in NYC.

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[a] The authors acknowledge that not all birthing people identify as women. Throughout this report, the terminology of "women" and "mothers" is used for consistency with the data sources used and the literature cited.

The SMM Project implemented a three-pronged strategy to:

• Improve the quality of maternity care at hospitals

• Learn about mothers' needs and their experiences with SMM, and the ramifications of SMM on their lives, to inform action and further research

• Inform and support mobilization of communities around maternal health

This document provides an overview of the SMM Project's final deliverable—a three-part "how-to" toolkit organized by the Project's strategies. The purpose of sharing the toolkit is to enable stakeholders from hospitals, the research field, and those engaging with community partners to replicate our work. The components of this toolkit can be used by stakeholders as standalone documents, or in unison. Each component document includes background information on the project, detailed information and resources on how each strategy was implemented, results of the work, and insights that could assist other jurisdictions to carry out similar initiatives. Each also includes Supplemental Online Content (SOC) material that includes the tools used in implementation.

STRATEGY 1: IMPROVE THE QUALITY OF MATERNITY CARE AT HOSPITALS

To improve hospital maternity care, the SMM Project developed a method to standardize identification of SMM cases and to review them during multidisciplinary quality improvement efforts in the hospitals.

This publication is a step-by-step guide for use by hospital administrators, maternity care providers, or health departments implementing facility-level SMM review in any health care jurisdiction. The first section describes the activities and decisions required to integrate SMM review into existing hospital QI committees. The second section presents data and insights from the SMM review at three hospitals in NYC. The SOC provides examples of contracts, agreements, and templates for data collection and reporting to support SMM review implementation. Read the full report: *A Guide to Integrating Severe Maternal Morbidity Case Review into Hospital Quality Improvement Committees,* https://www1.nyc.gov/site/doh/data/data-sets/severe-maternal-morbidity-surveillance.page.

STRATEGY 2: LEARN ABOUT MOTHERS' NEEDS, THEIR EXPERIENCES WITH SMM, AND THE RAMIFICATIONS OF SMM ON THEIR LIVES TO INFORM ACTION AND FURTHER RESEARCH

The second strategy of the SMM Project involved conducting a qualitative study to explore perceptions and experiences of women who experienced an SMM while giving birth and the myriad consequences that serious complication had on their lives. Key questions included:

- How did women experience pregnancy, childbirth, and the SMM event?

- What were women's perceptions of medical care during pregnancy and childbirth (e.g., quality, communication, and respectfulness), as well as their experiences related to implicit bias or racism, whether interpersonal, institutional, or societal?

- What were the emotional, physical, social, and financial consequences of the SMM event on women and/or their families?

- How did women experience the process of recovery and healing from the SMM event?

This publication includes a detailed methodology and thematic analysis. The analysis centers participants' experiences of pregnancy, birth, and the SMM event in the context of different provider interaction styles. This report includes key findings, lessons learned, and recommendations from the mothers to improve care for pregnant and parenting people who experience a severe complication during birth. The SOC provides examples of tools and resources underpinning the study. Read the full report: *Women's Experiences with Severe Maternal Morbidity in New York City: A Qualitative Report, https://www1.nyc.gov/site/doh/data/data-sets/severe-maternal-morbidity-surveillance.page.*

STRATEGY 3: INFORM AND SUPPORT COMMUNITY MOBILIZATION AROUND MATERNAL HEALTH

The SMM Project created an opportunity for NYC Health Department to engage with the community on the topic of maternal health. Project staff collaborated with staff across the agency to develop a coherent message and strategy to connect with the public on social media platforms, including using external social media influencers to increase the reach of the SMM Project. The Project also conducted a "Data-to-Action Road Show"—a series of presentations in community-based settings (government, business, and nonprofit) designed to bring information about maternal health complications to a diverse lay audience. Putting thoughtful effort into engaging with community members helps to build residents' trust, amplify community-based advocacy and knowledge, and promote equity.

This publication is a report intended to inspire and guide advocates, nonprofit service providers, and community members affected by SMM in implementing community engagement initiatives that inform and support mobilization around maternal health. Read the full report: *Innovative Strategies for Community Engagement: Raising Awareness to Reduce Severe Maternal Morbidity, https://www1.nyc.gov/site/doh/data/data-sets/severe-maternal-morbidity-surveillance.page.* The SOC provides examples of tools, presentations, and resources that can be adapted for other community engagement initiatives.

INTERSECTIONS WITH NYC HEALTH DEPARTMENT MULTIFACETED INITIATIVES

MATERNITY HOSPITAL QUALITY IMPROVEMENT NETWORK (MHQIN)

The *NYC Standards for Respectful Care at Birth*, which details the human rights of pregnant New Yorkers during and after childbirth, was cocreated by the NYC Health Department and the Sexual and Reproductive Justice Community Engagement Group, a group of over 100 community-based organizations. The NYC Health Department leveraged the work of the SMM Project and the NYC Standards to successfully advocate for city funding for the Maternity Hospital Quality Improvement Project (MHQIN) to reduce racial and ethnic disparities in maternal mortality and SMM. The scale-up of the QI approach developed by the SMM Project at 11 new hospitals brought the total number of hospitals implementing the QI approach to 14. Collectively, these hospitals serve approximately half of all births to Black and Latina mothers in NYC and provide services in areas most affected by high rates of SMM.

Most recently, the QI work has pivoted to exploring SMM cases resulting from COVID-19. Through the MHQIN, the 14 hospitals are also partnering with NYC Health Department to implement training on implicit bias and trauma-informed care and to expand the availability of doula support for birthing patients.

MATERNAL MORTALITY AND MORBIDITY REVIEW COMMITTEE (M3RC)

In coordination with the SMM Project, the NYC Health Department formed and convened its first-ever Maternal Mortality and Morbidity Review Committee (M3RC) in 2018, using methods, guidance, and tools from the Centers for Disease Control and Prevention's Maternal Mortality Review Information Application (CDC MMRIA; https://reviewtoaction.org). Starting with deaths from 2016, the multidisciplinary, multiethnic, and racially diverse M3RC reviews all maternal deaths in the city. The goal of the M3RC is to reduce preventable maternal deaths and eliminate inequities in these deaths. The M3RC gains a holistic understanding of each mother's journey to determine causes, assess preventability, and identify contributory factors and actionable recommendations to prevent future maternal deaths.

The NYC Health Department explored the added value of aligning M3RC with the SMM Project's case review and QI component. The team aligned the SMM review process, data collection tools, reporting forms with those developed by CDC for the MMRIA approach, which, the NYC Health Department and other jurisdictions use to conduct maternal mortality reviews, and invited representatives from the SMM Project hospitals to join the M3RC. These members learn best practices from the M3RC to apply to their committees, discuss implementation practices among themselves, and share their experiences with other members. Through M3RC and MHQIN, the NYC Health Department continues to explore ways to:

compare and contrast the causes of, contributing factors to, and prevention recommendations for maternal deaths and SMM cases; invite participating MHQIN hospitals to present their data and results at the M3RC meetings; and identify topics for further study of SMM surveillance data based on the maternal death reviews.

CONCLUSION

The SMM Project, the MHQIN, and the M3RC accentuate the importance of embedding efforts to improve clinical quality and ensure respectful maternity care into holistic programs of engagement with hospitals and the community. The rise of COVID-19 has created renewed urgency to address inequities in SMM in NYC, as providers navigate the demands of the pandemic amid efforts to address SMM at their institutions. Researchers, community members, and clinicians alike need opportunities to build shared vision and language on what equity and dignity in maternal health looks like.

The SMM end-of-project Maternal Health summit as well as future MHQIN and M3RC meetings will be convened virtually. The NYC Health Department and Fund for Public Health in NYC remain committed to sustaining applied research, dissemination of updated information, and dialogue on how to improve equity in maternal health outcomes. The SMM Project's work underscores that pregnant, birthing, and postpartum people and their families deserve empathy, action, and commitment to change from their local health care institutions and jurisdictions. The toolkit documents are designed to serve as a resource and a roadmap on how to implement a similar approach in other settings.

REFERENCES

1. New York City Department of Health and Mental Hygiene (NYC Health Department). 2020. *Pregnancy-Associated Mortality: New York City, 2011–2015.* New York. Link: https://www1.nyc.gov/assets/doh/downloads/pdf/ms/pregnancy-associated-mortality-report-2011-2015.pdf

2. NYC DOMH. 2016. *Severe Maternal Morbidity in New York City, 2008–2012*. New York. Link: https://www1.nyc.gov/assets/doh/downloads/pdf/data/maternal-morbidity-report-08-12.pdf

3. Jones, C. P. 2000. Levels of racism: A theoretic framework and a gardener's tale, *American Journal of Public Health* 90(8):1212–1215.

4. Krieger, N., Van Wye, G., Huynh, M., et al. 2020. Structural racism, historical redlining, and risk of preterm birth in New York City, 2013–2017. *American Journal of Public Health*.110(7):1046–1053.

5. Mendez, D. D., Hogan, V. K., and Culhane, J. 2011. Institutional racism and pregnancy health: Using Home Mortgage Disclosure Act data to develop an index for mortgage discrimination at the community level. *Public Health Reports* 126(Suppl. 3):102–114.

6. Shen, M. 2018. The association between the end of court-ordered school desegregation and preterm births among Black women. *PLoS One*. 13(8):13(8):e0201372.

7. Howell, E. A., Egorova, N. N., Balbierz, A., et al. 2016. Site of delivery contribution to black-white severe maternal morbidity disparity. *American Journal of Obstetrics and Gynecology*. 215(2):143–152.