Evaluating Telehealth as a Strategy for Reducing Maternal Mortality and Morbidity Disparities

Statement of Problem

The maternal mortality rate in the U.S. is the highest among high-income countries and has been steadily rising in recent years. Maternal mortality is only the tip of the maternal health iceberg; rates of severe maternal morbidity (SMM) have been increasing, and mental health conditions are now the leading underlying cause of pregnancy-related deaths in the U.S. "Mental health near misses," such as suicidality and overdose, are also increasing among birthing individuals. Disparities in outcomes of maternal mortality, SMM and mental health near misses (SMM+) exist for numerous populations due in part to a lack of access to quality and continuous prenatal and postpartum care. There is an urgent need to identify safe and effective interventions to reduce SMM+ using approaches that are responsive to the role of social determinants of health.

An emergent and embraced tool during the COVID-19 pandemic, telehealth may prove useful in addressing the social determinants of health necessary to improve care utilization by mitigating systematic structural and social challenges faced by marginalized birthing people. However, there is little data on maternal safety outcomes like SMM+. Additionally, research is needed to understand how telehealth can be implemented during high-risk transition periods (e.g., postpartum) to overcome existing barriers with the specific goal of reducing SMM+ and SMM+ disparities.

Description

Our team aims to determine the impact of telehealth on SMM+ and SMM+ disparities and to identify best practices for implementing telehealth to reduce these outcomes. We will take a mixed-methods approach to evaluate interventions with an equity lens by conducting novel causal inference analyses of a national Medicaid claims database, the largest U.S. health insurance provider during pregnancy. The study will include qualitative work centered in Philadelphia—a city with among the nation's highest maternal mortality disparities and featuring one of the country's only local maternal mortality review committees—but with national reach.

The specific aims of the study are to:

1. Estimate the effects of telehealth prenatal and postpartum care strategies and state policies expanding coverage for telehealth modalities and payment parity on SMM+ and SMM+ disparities.

2. Identify barriers and facilitators to implementing telehealth care with the goal of reducing SMM+ and SMM+ disparities.

3. Develop and disseminate best practice recommendations for using telehealth to detect early warning signs of SMM+.

Next Steps

We'll establish a community advisory board that will advise on the current project and next steps for future research.

Utilizing national Medicaid claims data will offer unique opportunities in the future to explore the impact of other policies on SMM+ and to identify potential clinical and policy interventions to improve maternal heath equity.

Our hope is that this research will fill critical gaps in knowledge about the safety, effectiveness, and equity in maternal telehealth care and will inform care, guidelines, and policy in Philadelphia and nationally.

This project page was last updated in December 2024.

Suggested Citation

Children's Hospital of Philadelphia, PolicyLab. *Evaluating Telehealth as a Strategy for Reducing Maternal Mortality and Morbidity Disparities* [Online]. Available at: **http://www.policylab.chop.edu** [Accessed: plug in date accessed here].

PolicyLab Leads

Meredith Matone
DrPH, MHS

Director

Dr. Matone's research interests include maternal and young child health, as well as family well-being. She focuses on building community and public agency research partnerships to support improvements in policies and programs that serve mothers and infants in under-resourced communities. She is experienced in large-scale program evaluation, mixed-methods research designs, and use of administrative data for observational study designs in areas of child and caregiver health.

Dr. Matone is a senior fellow at the University of Pennsylvania's Leonard Davis Institute of Health Economics, a faculty affiliate at The Field Center, and a board member of the Pennsylvania Association for the Education of Youth Children. Dr. Matone received her Doctor of Public Health, specializing in child and adolescent health and development, from Johns Hopkins Bloomberg School of Public Health. She is an alumnus of the Doris Duke Fellowship for the Promotion of Child Well-being program and a former Stoneleigh Foundation fellow.

Meredith Matone
DrPH, MHS
Email: MatoneM@chop.edu

Ellen Caniglia
ScD

Faculty Scholar

Ellen Caniglia is a faculty scholar at PolicyLab at Children's Hospital of Philadelphia and an assistant professor of epidemiology in the Department of Biostatistics, Epidemiology, and Informatics at the University of Pennsylvania Perelman School of Medicine. Dr. Caniglia is a perinatal and HIV epidemiologist who works to improve health outcomes among pregnant people and their children, and among people with HIV. Her work utilizes methods for causal inference to identify optimal treatment and prevention strategies in these populations. Current and future work includes evaluating the effects of lifestyle, pharmaceutical, and health services interventions to improve neonatal and maternal outcomes and disparities in these outcomes.

Dr. Caniglia received her ScD in Epidemiology from the Harvard T.H. Chan School of Public Health. She collaborates broadly on projects related to causal inference; HIV; and reproductive, perinatal, and pediatric epidemiology.

Ellen Caniglia
ScD
Email: Ellen.caniglia@pennmedicine.upenn.edu

Team

Stephanie Garcia
MPH

Senior Research Manager

Stephanie Garcia (she/her) is a senior research manager at PolicyLab at Children's Hospital of Philadelphia. She oversees the day-to-day activities of several community-engaged, mixed-methods research and evaluation projects and supports strategic planning and team building for a team of maternal and child health (MCH) researchers. She has methodologic and content expertise in program evaluation, participatory research methods and public health systems. Her research interests include maternal and early childhood well-being; intimate partner violence and community violence; and understanding how organizations/systems can effectively work together to support families.

Prior to PolicyLab, she coordinated a Health Resources and Services Administration (HRSA)-funded technical assistance center at the Johns Hopkins Bloomberg School of Public Health that focused on supporting state agencies in adopting evidence-informed MCH programs/practices. She received her Master of Public Health in community health sciences, specializing in MCH, from the University of Illinois at Chicago.

Stephanie Garcia
MPH
Email: GARCIAS1@CHOP.EDU

Katherine Kellom

Administrative Manager

Katherine Kellom (she/they) is an administrative manager at PolicyLab and the director of the Qualitative Research Core at Children's Hospital of Philadelphia. She has worked at nationally top-ranked institutions with teams comprised of experts in their fields conducting qualitative, mixed and multi-method research for more than ten years. Beginning as a research assistant at the University of Pennsylvania's Mixed Methods Research Lab, Katherine currently serves across a variety of project teams to provide conceptual and technical support for clinical and community-based research projects. She has extensive knowledge and valuable practical experience applying qualitative research methodologies with a focus on integrating key stakeholder perspectives and goals into research designs.

Katherine leads and advises project teams using qualitative methods to achieve research aims on projects ranging from small pilots to state-wide, mixed-methods evaluations. Katherine is an expert in facilitation techniques and in the use of the qualitative data analysis tool, NVivo; she provides training in both areas. As director of the Qualitative Research Core, Katherine manages and supports staff members and qualitative team members in the Core and at PolicyLab, ensuring skillset development and access to the resources needed to contribute high-quality work to various project teams.

Katherine received her Bachelor of Arts degree from Bryn Mawr College in 2009, majoring in psychology.

Katherine Kellom
Email: KellomK@chop.edu

Thais Costa Macedo de Arruda

Clinical Research Coordinator

Thais Arruda is a clinical research coordinator at PolicyLab at Children's Hospital of Philadelphia (CHOP). She joined CHOP in 2024 as a student clinical assistant and has since contributed to projects aimed at improving child and maternal health. Thais enjoys mixed-methods and community based participatory research.

She holds a Bachelor's of Science in Neuroscience from Temple University, where she focused her studies on the intersection between neuroscience and public health. Prior to joining CHOP, she worked as a research assistant in various projects involving substance use recovery, childhood trauma, and mental health outcomes. Thais is passionate about improving health outcomes for children and mothers and plans to continue developing expertise as she pursues future academic or professional goals.

Thais Costa Macedo de Arruda
Email: costamacet@chop.edu

Jessica Hopkins

Clinical Research Assistant

Jessica Hopkins is a clinical research assistant at PolicyLab at Children's Hospital of Philadelphia (CHOP). Jessica works with the maternal child health team (MCH) at PolicyLab and the BHS-ED data repository with the Center for Violence Prevention (CVP) at CHOP.

In her role with CVP, Jessica works to support principal investigators as she administratively oversees tasks pertaining to the behavioral health screen data repository and other data-related communications. As a research assistant with the MCH team at PolicyLab, her work focuses on maternal, child, and family well-being, intimate partner violence, and involvement with the community, organizations, and systems to better serve and support families.

Jessica Hopkins
Email: Hopkinsj3@chop.edu

Funders of Project

National Institute of Child Health and Human Development

Project Contact

Ellen Caniglia