

WORLD PROJECTS  
**Columbia Global**

# Summary Project Report: Leveraging Policy to Improve Maternal Health in the Fourth Trimester

2024



## **Project Period**

January 1, 2020 - June 30, 2024

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Columbia World Projects (CWP) is a university-wide initiative established in 2017 to bridge scholarly knowledge and real-world action. With the goal of achieving the greatest possible impact on pressing challenges of our time, CWP mobilizes Columbia University's scholars, researchers, practitioners, and students to identify and implement interdisciplinary solutions to complex societal challenges in partnership with targeted change agents, such as policymakers, government agencies, non-governmental organizations, and corporations.

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## Leveraging Policy to Improve Maternal Health in the Fourth Trimester

### Introduction

The maternal mortality rate in the United States (U.S.) is higher than any comparable high-income nation. This maternal health crisis is marked by recent increases in maternal mortality and wide racial disparities in pregnancy-related deaths [1]. Over half of pregnancy-related deaths in the U.S. occur in the year after delivery [2], sometimes referred to as the “fourth trimester.” However, little attention has historically been paid to this critical time period, resulting in, among other things, a dearth of postpartum data to inform programs and policies. The ***Leveraging Policy to Improve Maternal Health in the Fourth Trimester*** project worked with state and city health departments to collect representative, multi-state data on the needs of postpartum people to inform and accelerate policy changes to improve postpartum health outcomes, particularly among Medicaid recipients [3]. This project, first presented as part of the CWP 2019 Maternal Health Forum, spanned four and a half years, (January 2020-June 2024), and engaged an interdisciplinary team of Columbia University and Cornell University faculty with social work, public health, and legal expertise and public health practitioners from city and state health departments.

### Background

Federal and state policymakers have been actively seeking solutions to the maternal health crisis in America, with a particular focus on the postpartum year. Many efforts focus on expanding eligibility and services for the nearly half (42%) of U.S. births that are covered by Medicaid [4], which disproportionately covers rural people, people of color, and those of lower socioeconomic status. For example, as of 2024, all but four states have implemented an extension of pregnancy Medicaid coverage through one year postpartum [5] and many states are adding doula care [6] to the list of reimbursed pregnancy-related services. However, the enactment, implementation, and evaluation of these policies has been hindered by the lack of systematic, representative data collection on the health and social needs of birthing people and their families in the year after a child is born. While pregnancy and birth outcomes are well documented in the U.S., the lack of data on postpartum outcomes represents a significant gap in the nation’s public health data infrastructure.

### Objectives

The goal of this project was to work with state and city governments to collect first-of-its-kind, representative, multi-state data on the health and social needs of postpartum people and specifically to:

1. **Advance postpartum data collection** on a national level and institutionalize postpartum outcomes as critical indicators for maternal health surveillance.
2. **Inform and accelerate evidence-based policy changes** that will improve health care access and health outcomes for postpartum people, particularly those on Medicaid.



## Methods [7]

The project team collaborated with health departments in six states (Kansas, Michigan, New Jersey, Pennsylvania, Utah, Virginia) and New York City (NYC) to conduct the *Postpartum Assessment of Health Survey* (PAHS), a first-of-its-kind multi-state survey on postpartum health outcomes, overall well-being, experience of care, and health care access and barriers in the postpartum year. PAHS was administered at 12-14 months postpartum to respondents to the 2020 CDC Pregnancy Risk Assessment Monitoring Survey (PRAMS) [8], the largest survey on pregnancy risk factors and outcomes in the U.S. Jurisdictions were selected to participate in PAHS on the basis of having a sufficient PRAMS sample size, consistently meeting the CDC PRAMS response rate thresholds, and having the willingness and capacity to collaborate with the research team.

People in the PRAMS sampling frame were contacted by mail or telephone to complete the PRAMS survey from two-six months postpartum. From January 2021 to March 2022, people in the PAHS sampling frame were then contacted by mail, telephone, or email, with weekly follow-up from 12-14 months postpartum. PAHS was offered online and by telephone in English and Spanish and contained 108 questions. Survey questions were developed with input from participating health departments, including a selection of up to 10 jurisdiction-specific “flex questions.” PAHS measured a number of self-reported variables related to postpartum well-being, including health insurance; health care access, quality, and use; health outcomes; substance use; and social needs.

Data collected on birth certificates (after labor and delivery) were linked to PRAMS (two to six months, early postpartum), and PAHS (12-14 months, late postpartum) to create a longitudinal data set with variables covering preconception through to one year after birth. The team calculated survey-weighted rates of each measure, stratified by insurance type (Medicaid or commercial) at the time of delivery, to produce estimates representative of live births in 2020 in the seven jurisdictions. The team also calculated survey weights to account for the PRAMS and PAHS sampling design and nonresponse so that all estimates from PAHS are representative of all live births in 2020 in the seven jurisdictions.

“There is significant state and federal policy momentum to reduce maternal morbidity and mortality in the ‘fourth trimester,’ but little data is available to help policymakers prioritize these investments. This survey is designed to fill this gap and promote evidence-based approaches to improving postpartum health.” – **Jamie Daw**, Assistant Professor of Health Policy and Management, Mailman School of Public Health, Columbia University

## Findings and Results

The project team established deep, collaborative relationships with the participating health departments and successfully implemented the 2020 PAHS during the height of the COVID-19 pandemic. The survey response rate was high (76%) and approximately 5,000 responses were received from birthing people in the seven jurisdictions. Published PAHS findings have already advanced understanding of multiple dimensions of maternal and postpartum health, including the financial burden of childbirth costs [9], rates of mistreatment in childbirth [10], the health and social needs of Medicaid beneficiaries after birth [11], racial disparities in postpartum mental health symptoms and treatment [12], barriers to health insurance and perinatal care for immigrants [13], disparities in patient education on postpartum warning signs [14], and others. For example, PAHS findings showed that:



- Compared with respondents who had commercial insurance at the time of childbirth, Medicaid respondents were less likely to have a usual source of care and reported less use of primary, specialty, and dental care in the postpartum year.
- Depression symptoms and social concerns, such as food insecurity, intimate partner violence, and financial strain, were significantly higher in the Medicaid population.
- Approximately 1 in 8 individuals who gave birth in the participating jurisdictions reported experiencing mistreatment during childbirth, with the highest rates among those who were Medicaid-insured, identified as LGBTQ+, and those who had obesity, a history of substance use disorder, and mood disorders.
- Despite no racial differences in postpartum depression diagnosis, postpartum people of color were significantly less likely than non-Hispanic White respondents to receive treatment, demonstrating stark inequities in the management of postpartum depressive symptoms.
- Despite the importance of early identification of symptoms that may be early signals of risk for maternal morbidity and mortality, patient education on postpartum warning signs is alarmingly poor with wide racial-ethnic disparities.

These findings can inform clinical guidelines and approaches and policy efforts at the local, state, and federal levels, including in the seven PAHS jurisdictions, but also extending to the 48 states that have extended coverage to one year postpartum (as of January 2025). More details on PAHS analysis and findings have been published in several papers, listed at the end of this report.

## Key Outputs

The PAHS data have been used by participating states and NYC to inform their efforts to improve maternal health and to secure additional grant funding. The project has also advanced science around postpartum health, resulting in several high-impact publications, presentations, media coverage, and academic awards, as well as new collaborations across Columbia University and with researchers at other institutions. As a testament to the value of the PAHS to science and to health department partners, the team has secured \$3.9 million in funding from the National Institutes of Health (NIH) and the Commonwealth Fund to continue the PAHS survey, next with a cohort of people who gave birth in 2024, and expand to two new jurisdictions, Hawaii and the District of Columbia.

### Key project outputs include:

- Developed and delivered a complete PAHS data package along with presentations of key findings to be used by researchers and state and city partners.
- The [PAHS website](#), which includes an overview of survey topics, the [2020 PAHS questionnaire](#), and state and city data.
- 10 peer-reviewed publications (listed at the end of this report).
- Seven state and city-specific [maternal fact sheets](#) (Figure 1).
- Seven state and city-specific PAHS data summary [fact sheets](#) (Figure 2).
- Developed and tested a successful model for future postpartum data collection and analysis.



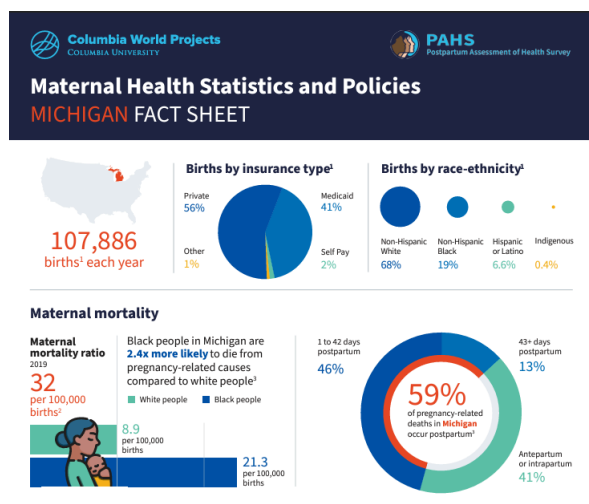


Figure 1.

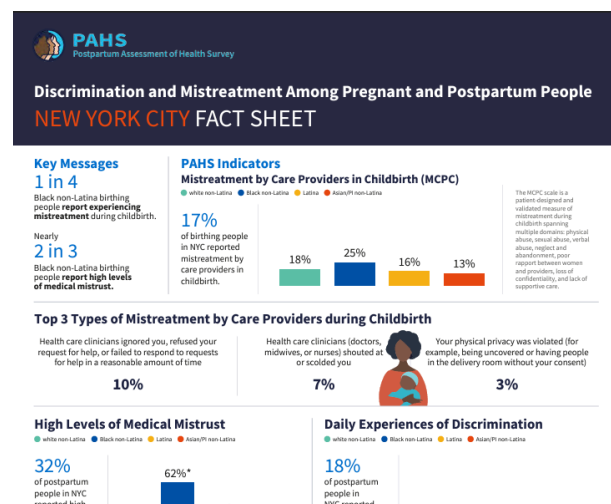


Figure 2.

## Why This Project Was Important

The maternal mortality rate in the U.S. is higher than any comparable high-income nation, with stark racial inequities. Over half of pregnancy-related deaths (63%) occur in the year postpartum, the “fourth trimester,” and an estimated 84% are preventable [15]. Beyond mortality, many postpartum people experience morbidities from physical and mental health conditions in the year after childbirth. The lack of postpartum data is a major challenge to policy and program efforts seeking to improve maternal health. The PAHS represents the first multi-state representative survey on maternal health in the year after birth. The results of this project are having immediate impacts on maternal health surveillance in the U.S., informing policy and public health efforts at a time when significant investments in postpartum health are occurring, for example, through the recent extensions of postpartum Medicaid through one year after birth [16].

Additionally, the project team has demonstrated the value and feasibility of postpartum follow-up surveys to the participating jurisdictions and the CDC. One of the ultimate goals of the study is to build a survey such as PAHS into the national public health data infrastructure. If this occurs, it would be a huge accomplishment that will change how maternal health is measured in the U.S., putting a renewed focus on what happens after birth and allowing for the evaluation of policies that target outcomes in this critical period.

## Lessons on Implementing Social Impact Projects at Columbia University

This project exemplifies Columbia’s mission to leverage scholarly knowledge to create societal and global impact, in close partnership with organizations and practitioners outside of academia. Government partners have been involved in the project from day one, working with the team to build the survey and methodology, ensuring the findings will be relevant to decision-makers, and creating buy-in and joint ownership over the data and research findings. The project was built on a strong scientific foundation—the need for rigorous collection and analysis of data on a timely and important societal problem—allowing the team to leverage the strengths of academia to advance scientific goals and knowledge, while also informing the actions of our external government partners in city and state health departments. Having these dual purposes—of advancing science and public good—is critical for the success of social impact projects, to ensure that they align with academic constraints,



strengths, and incentives. This project also highlights the importance of interdisciplinarity in tackling significant public health problems.

## CWP as Catalyst

CWP funding and support enabled the project team to capitalize on a time-sensitive opportunity to launch PAHS with multiple state and city health departments. The interdisciplinary nature and cross-school collaborations enriched the project to address maternal health from both a health and social policy lens. Additionally, CWP was able to support the team to navigate extensive administrative tasks and challenges over the course of the project, for example, obtaining multiple Institutional Review Board (IRB) approvals and data use agreements and contracting with seven state and city health departments. Further, the CWP project enabled the project team to demonstrate the feasibility and utility of PAHS and to secure an additional \$3.9 million in funding to continue and expand the survey with a 2024 cohort.

“This ambitious project would not be possible without this unique funding mechanism. We were able to act quickly to seize a time-sensitive opportunity to work with our government partners. Our success allowed us to demonstrate the feasibility and value of this project to federal funders. We now have more funding to build what we hope is a long-term research agenda and academic-government partnership on this important topic.” – **Jamie Daw**, Assistant Professor of Health Policy and Management, Mailman School of Public Health, Columbia University

“CWP’s support was significant because we had seven partners, a vendor, and the federal government—the CDC—all engaged. We had 10 IRBs that we had to go through at multiple stages of the project. CWP helped us navigate this at a high level. They helped us put all the legal contacts and data use agreements in place. Things can get stuck at Columbia sometimes, but CWP made sure everything stayed on track, even through the challenges of COVID.” – **Heidi Allen**, Associate Professor, Columbia School of Social Work, Columbia University

## Next Steps

The project team has successfully secured **\$3.9 million** of funding from the National Institutes of Health and **\$200,000** from the Commonwealth Fund to continue the PAHS with six of the existing government partners, as well as in two new jurisdictions, Hawaii and the District of Columbia. Through this ongoing work, the team will refine the indicators of maternal health and wellbeing captured in the first round of PAHS and continue to demonstrate to states, cities, and the public health and health policy communities more broadly, the value of conducting surveillance and measuring outcomes in the postpartum year. State partners will continue to use the 2020 PAHS data and findings to inform their work and in grant applications to secure additional maternal health funding. Finally, the team will continue outreach with the CDC and other federal agencies about the importance and feasibility of building postpartum outcome collection into the national public health data infrastructure.



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## Notes

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[3] Authorized by Title XIX of the Social Security Act, Medicaid was signed into law in 1965 alongside Medicare. Medicaid, offered in all states, the District of Columbia, and U.S. territories, provides health coverage to 72.9 million Americans (as of June 2024 enrollment data), including eligible low-income adults, children, pregnant women, elderly adults, and people with disabilities. Although the Federal government establishes parameters for all states to follow, each state administers their Medicaid program differently. Source: <https://www.medicaid.gov/>.

[4] KFF. Births Financed by Medicaid. Available at: <https://www.kff.org/medicaid/state-indicator/births-financed-by-medicaid/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D#notes>

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[7] For more details on PAHS study data and methods, please see: Daw, J.R., Underhill, K., Liu, C., Allen, H.L. (2023). The health and social needs of Medicaid beneficiaries in the postpartum year: Evidence from a multistate survey. *Health Affairs* 42(11):1575-85. <https://www.healthaffairs.org/doi/10.1377/hlthaff.2023.00541>

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