# PHILADELPHIA MATERNAL MORTALITY

## 2019-2023

DATA & SURVEILLANCE
BIRTH JUSTICE PHILLY

Department of
Public Health
CITY OF PHILADELPHIA

**We dedicate this report to the memory of those who have been lost, with sympathy and respect for their families and loved ones.**

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# EXECUTIVE SUMMARY

**Maternal health is an indicator of a population's overall health status. Maternal mortality (death) and severe maternal morbidity (serious complications of pregnancy and birth) negatively impact the health and well-being of individuals, families, and communities, and highlight the ongoing need for improvements to health care delivery systems. Maternal mortality has gradually increased in the United States (US) over the past 30 years and has more recently become a focus of national attention.**

State and local Maternal Mortality Review Committees (MMRCs) are tasked with reviewing cases of maternal death to determine what factors led to the death and whether the death could have been prevented. Through a process of obtaining medical and social service records, conducting family interviews (when possible), and gathering multidisciplinary members to discuss each case, MMRCs seek to understand the circumstances leading up to each case of maternal death and to develop recommendations for policy and programmatic interventions to prevent future deaths.

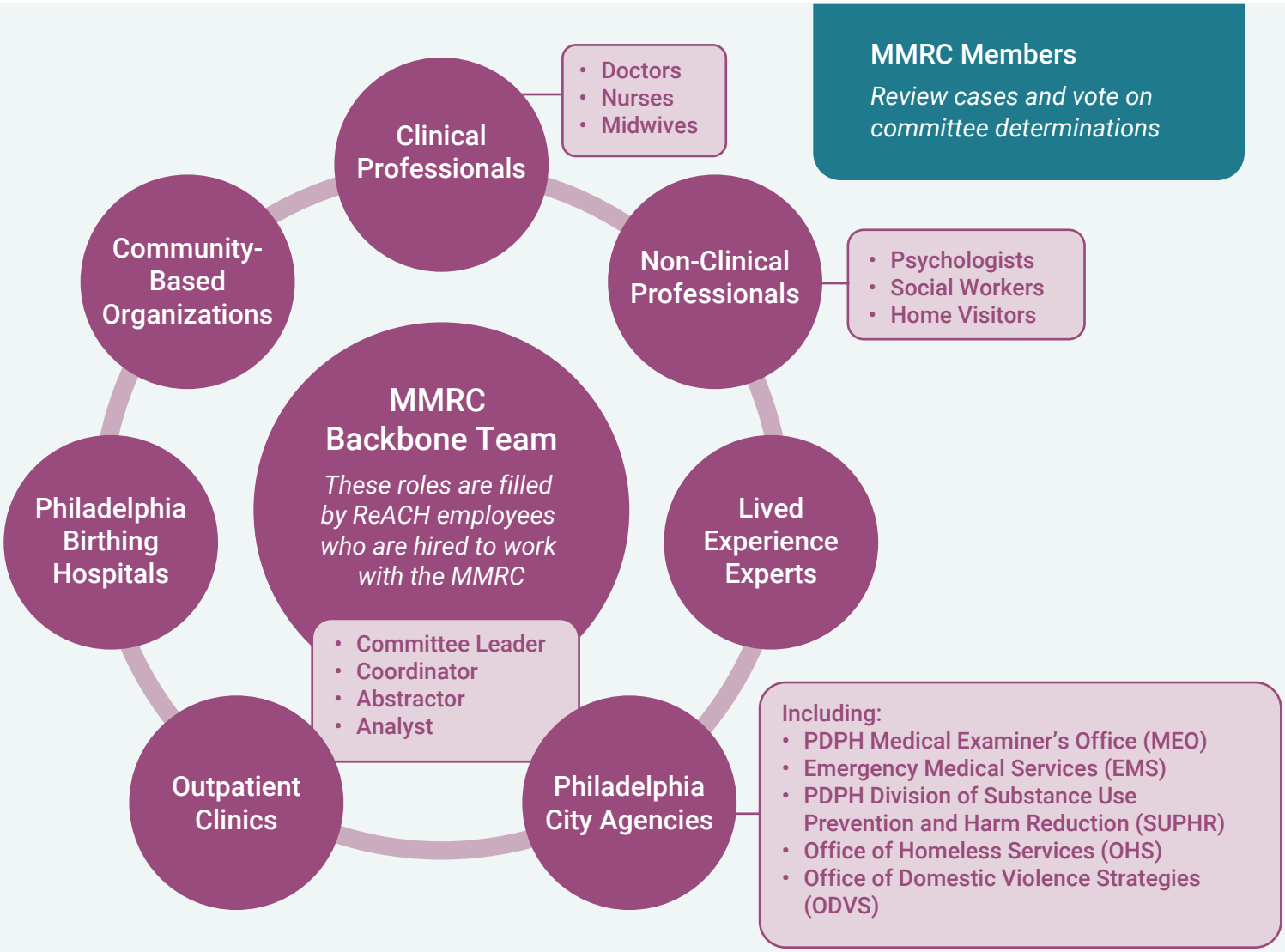
## The Philadelphia MMRC

In 2010, Philadelphia became the first jurisdiction in the US to create a city-level (non-statewide) MMRC. The Philadelphia MMRC gathers multidisciplinary stakeholders from across the city to better understand the causes of maternal mortality and to provide recommendations for policy and programmatic change. Since its creation, the Philadelphia MMRC has gained knowledge and insight into the contributing factors of maternal mortality through its review of over 400 maternal death cases. This, in turn, has helped Philadelphia identify gaps in local health care systems and community resources that have contributed to pregnancy-associated and pregnancy-related deaths. The process has helped focus limited resources to address these issues, with a goal of reducing maternal mortality and improving overall perinatal health and well-being. Philadelphia's MMRC processes continue to be refined: from better and timelier identification of pregnancy-associated deaths, to obtaining new sources of data and records, to improved methods for obtaining family interviews, and adding new team members with different perspectives and backgrounds.

In 2019, leadership of the Philadelphia MMRC transitioned from the Philadelphia Department of Public Health (PDPH) Medical Examiner's Office (MEO) to the PDPH Division of Reproductive, Adolescent, and Child Health (ReACH). The MMRC is part of ReACH's Birth Justice Philly team, which aims to leverage citywide data to develop and implement perinatal health initiatives (see pages 38-43 for more information). In 2020, the Philadelphia MMRC implemented the Maternal Mortality Review Information Application (MMRIA), a data-collection system developed by the Centers for Disease Control and Prevention (CDC) that standardizes data collection from MMRCs nationwide. The Philadelphia MMRC is partially funded by the CDC's Enhancing Reviews and Surveillance to Eliminate Maternal Mortality (ERASE MM) Program.

# The Philadelphia MMRC: Who's Who

**The Philadelphia MMRC comprises approximately 50 individuals representing a wide range of entities across the city. Each member of this highly multidisciplinary committee provides valuable insight into every case reviewed.**




This report analyzes data from the 120 pregnancy-associated deaths that occurred in Philadelphia between 2019 and 2023. This report aims to describe the current state of maternal mortality in Philadelphia and to highlight the MMRC's recommendations to reduce it.

This is the third report from the Philadelphia MMRC. Previous reports can be found at www.birthjusticephilly.com.

# Definitions Used in this Report

**Pregnancy-Associated Death**

*Any death that occurs during pregnancy, or within 1 year of the end of pregnancy, irrespective of the cause of death or the site and duration of the pregnancy.**

**Pregnancy-Related Death**

*A death that occurs during pregnancy or within 1 year of the end of pregnancy that is caused by, related to, or aggravated by the pregnancy or its management.***

**Pregnancy-Associated but NOT Related Death**

*A death that occurs during pregnancy or within 1 year of the end of pregnancy that is caused by something unrelated to the pregnancy.****

*MMRC determination of whether the death was **caused by, related to, or aggravated by the pregnancy or its management.***

* *"End of pregnancy" includes delivery of a baby, miscarriage, or abortion.*

** *Pregnancy-related deaths are a subset of pregnancy-associated deaths.*

*** *These deaths represent a small portion of all the deaths to people of reproductive age, but do not necessarily reflect opportunities for prevention in the perinatal health space.*

**This report primarily focuses on Pregnancy-Related Deaths. The MMRC's unique role is to leverage members' expertise in the perinatal health sphere to improve outcomes for pregnant and postpartum individuals. Pregnancy-related deaths represent the most pressing perinatal health issues in our community, and focusing on these cases enables the MMRC to make recommendations that specifically target these key issues.**

# KEY FINDINGS

- Between 2019 and 2023, there were 120 cases of pregnancy-associated death in Philadelphia, which is an average of **24 pregnancy-associated deaths per year**. The Philadelphia MMRC determined that 41 of these cases (34.2%) were pregnancy-related, which is an average of **8 pregnancy-related deaths per year**.

- The overall pregnancy-related mortality ratio (PRMR) in Philadelphia from 2019-2023 was **42.2 deaths per 100,000 live births**.

- **Unintentional drug overdose was the leading cause of pregnancy-related mortality in Philadelphia from 2019 to 2023**, accounting for 32% of pregnancy-related deaths. Overdose deaths had been trending upward in Philadelphia and nationwide during this timeframe, particularly overdose deaths caused by opioids, and this trend is mirrored in maternal mortality data.

- **Mental health conditions (other than substance use disorder) were determined to be a contributing factor in 42% of pregnancy-related death cases.** The perinatal period can have significant impacts on the mental and emotional well-being of pregnant and postpartum individuals, and accessing mental health care is often challenging. Resources to support mental health in this population are vital to preventing maternal mortality.

- **12% of pregnancy-related deaths in this time period were caused by hemorrhage, and most of these fatal hemorrhages were caused by ruptured ectopic pregnancies**, highlighting the importance of early pregnancy detection and care. There were no cases of fatal postpartum hemorrhage related to delivery during this time period, highlighting the success of interventions aimed at detecting and treating hemorrhage in the delivery room.aimed at detecting and treating hemorrhage in the delivery room.

- **41% of pregnancy-related deaths in this time period occurred in the late postpartum period, between 43 and 364 days after the end of pregnancy.** Although the postpartum period is traditionally thought of as the first 6 weeks after delivery, it is essential to consider that individuals may be at risk of adverse health outcomes for many months after pregnancy.

- **Pregnancy-related mortality remained high among non-Hispanic Black Philadelphians**, who have historically experienced disproportionately high rates of pregnancy-related deaths. **Pregnancy-related mortality also increased substantially among non-Hispanic White Philadelphians** in this time period, who have historically experienced comparatively low rates of pregnancy-related death.

- **The MMRC determined 90% of pregnancy-related deaths in this time period to be preventable.** A death is considered preventable if the committee determines that there was at least some chance of the death being averted by one or more *reasonable changes to patient, family, facility, system, and/or community factors*.

# METHODOLOGY

## Case Identification

Several strategies are used to identify cases of pregnancy-associated death among Philadelphia residents. The MEO reviews death certificates to identify individuals with a positive "pregnancy checkbox" – a field on the death certificate indicating whether the certifier is aware of a current or recent pregnancy – as well as for obstetric diagnostic codes listed as a cause of death. Death certificate information is also cross-checked against birth certificates and fetal death certificates to identify matches between individuals who have delivered a baby in the last year. Finally, some cases are identified by the news, social media, or other communication channels.

## Family Interviews

When a case is identified, a Bereavement Care Provider reaches out to individuals who were close to the decedent, such as family members or next of kin, to offer bereavement support. The decedent's loved ones are also invited to participate in an optional interview with the provider.

Interviewing family members or next of kin is an opportunity for the review committee to better comprehend the decedent's life, including their pregnancy, and the circumstances leading up to their death that are beyond the clinical diagnosis and medical notes. This additional contextual data enables the MMRC to make more informed recommendations by assessing the multitude of factors that contributed to the death. More so, these narratives help humanize the data and statistics surrounding these tragic deaths. The interview is an opportunity to honor the life lost and acknowledge the profound impact these individuals had on their families and communities.

## Case Abstraction

Information about the decedent is collected from medical records and other city administrative data sources. The Abstractor gathers and summarizes this information into a deidentified case narrative. In some cases, the Abstractor, Committee Chair, and Maternal Health Nurse Manager will determine that a case is appropriate for expedited review, which means that the death was clearly not pregnancy-related. These expedited cases are presented to the MMRC but are not reviewed in detail. Cases that require full committee review are assigned to a two-person team of MMRC members (one clinical reviewer and one non-clinical reviewer) who conduct a detailed review of the case narrative.

## Committee Review

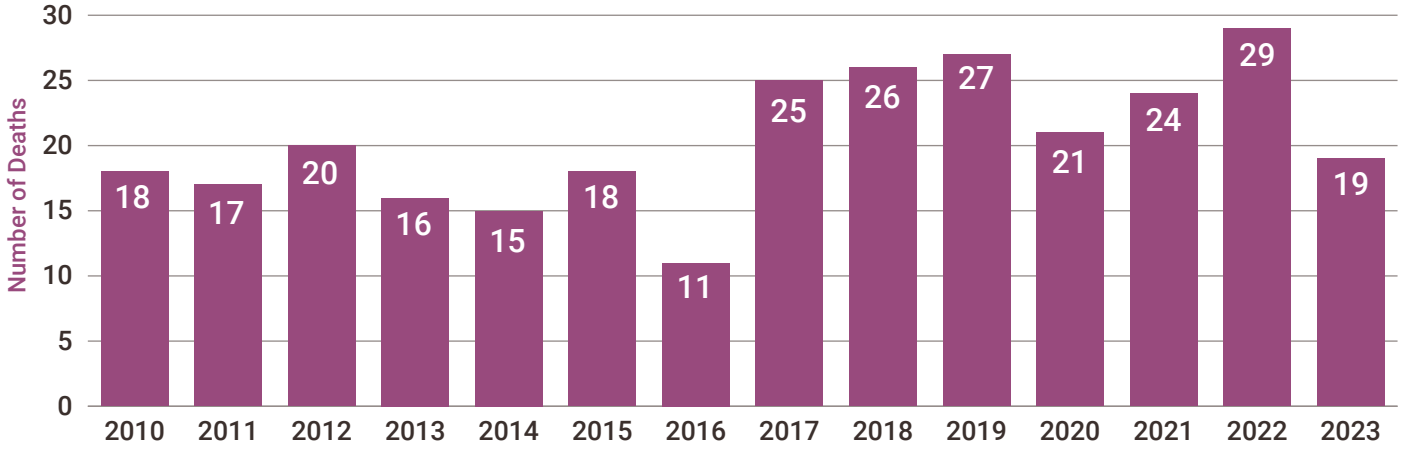
Reviewers present their assigned cases to the full MMRC. The committee uses the information to determine whether the death was pregnancy-related, whether the death was preventable, and what factors contributed to the death. The committee also makes recommendations for actions that might have changed the course of events leading to the death. The committee's determinations and recommendations are documented on the standardized MMRIA committee decision form and entered into the MMRIA system, which is the centralized, CDC-managed database for all MMRCs in the US.

# MATERNAL MORTALITY DATA

The following two figures describe trends in **pregnancy-associated** deaths among Philadelphians. Pregnancy-associated deaths offer insight into the causes and circumstances that lead to premature death among individuals of reproductive age, although most of them are not directly related to pregnancy. For this reason, the remainder of this report focuses on **pregnancy-related deaths** and the Philadelphia MMRC's recommendations, based on their expertise in the perinatal health field, to make pregnancy safer for Philadelphians.

## Pregnancy-Associated Deaths Over Time

All deaths during pregnancy or up to 1 year after in Philadelphia, 2010-2023




» Overall, pregnancy-associated mortality has been increasing in Philadelphia over the last 14 years. There were 120 pregnancy-associated deaths from 2019-2023, which is a 26% increase from the number of deaths observed in the preceding 5-year period (95 pregnancy-associated deaths from 2014-2018).

» The lowest number of pregnancy-associated deaths was observed in 2016 (11 deaths), and the highest number in 2022 (29 deaths).

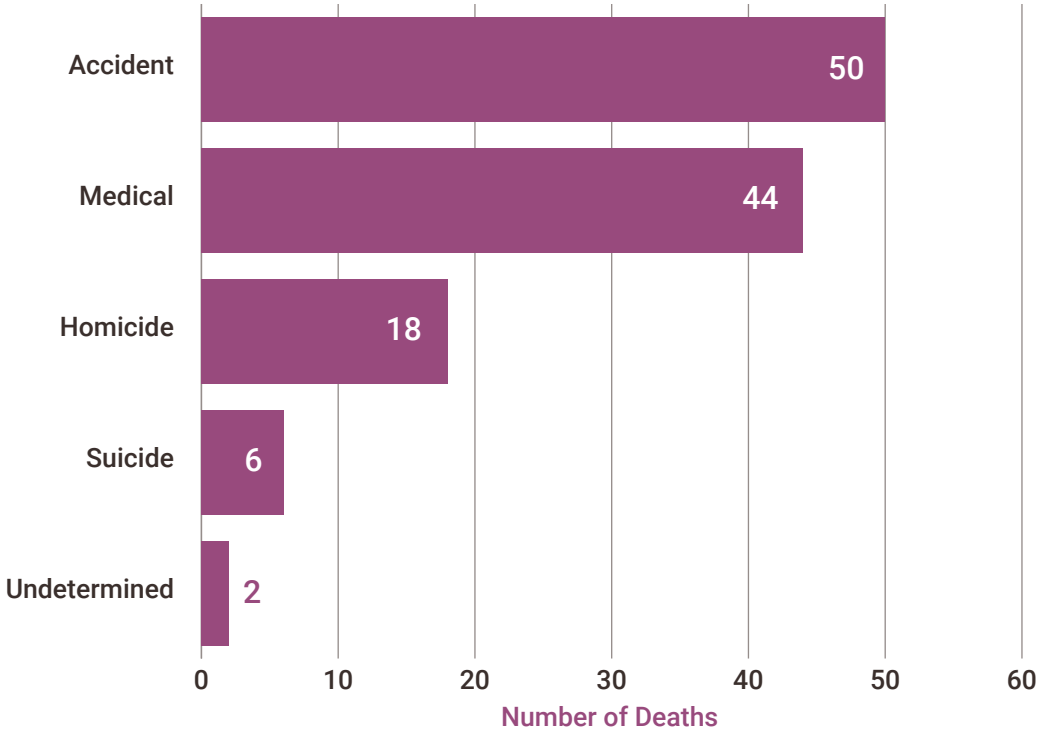
» The overall pregnancy-associated mortality ratio (PAMR), which is the number of pregnancy-associated deaths per 100,000 live births, was 123.5 in Philadelphia from 2019 to 2023.

- The PAMR for the previous 5-year period (2014-2018) in Philadelphia was 88.3 deaths per 100,000 live births.

» This shifting trend in PAMR reflects an overall increase in age-adjusted mortality in Philadelphia during this time period[1] and is not necessarily related to perinatal health. To understand changes in perinatal health outcomes, it is essential to look more closely at pregnancy-related deaths (see page 10).

# Manner of Pregnancy-Associated Deaths

Manner of death
for all people who died
during pregnancy or
up to 1 year after
in Philadelphia, 2019-2023




» Most pregnancy-associated deaths in Philadelphia are caused by **accidents** (42.4%), such as drug overdoses or car crashes, or by **medical complications** (37.3%), such as infections or cardiovascular problems.

» In this time period, 15.3% of pregnancy-associated deaths were caused by **homicide**. This is a marked increase over previous years. From 2013 to 2018, homicide accounted for only 5% of pregnancy-associated deaths.

» There were 5 cases of pregnancy-associated death due to **COVID-19** infection during this time period. These deaths are part of the "Medical" category.

» Of the 120 cases of pregnancy-associated death in this time period, 41 cases (34.2%) were determined by the Philadelphia MMRC to be pregnancy-related.

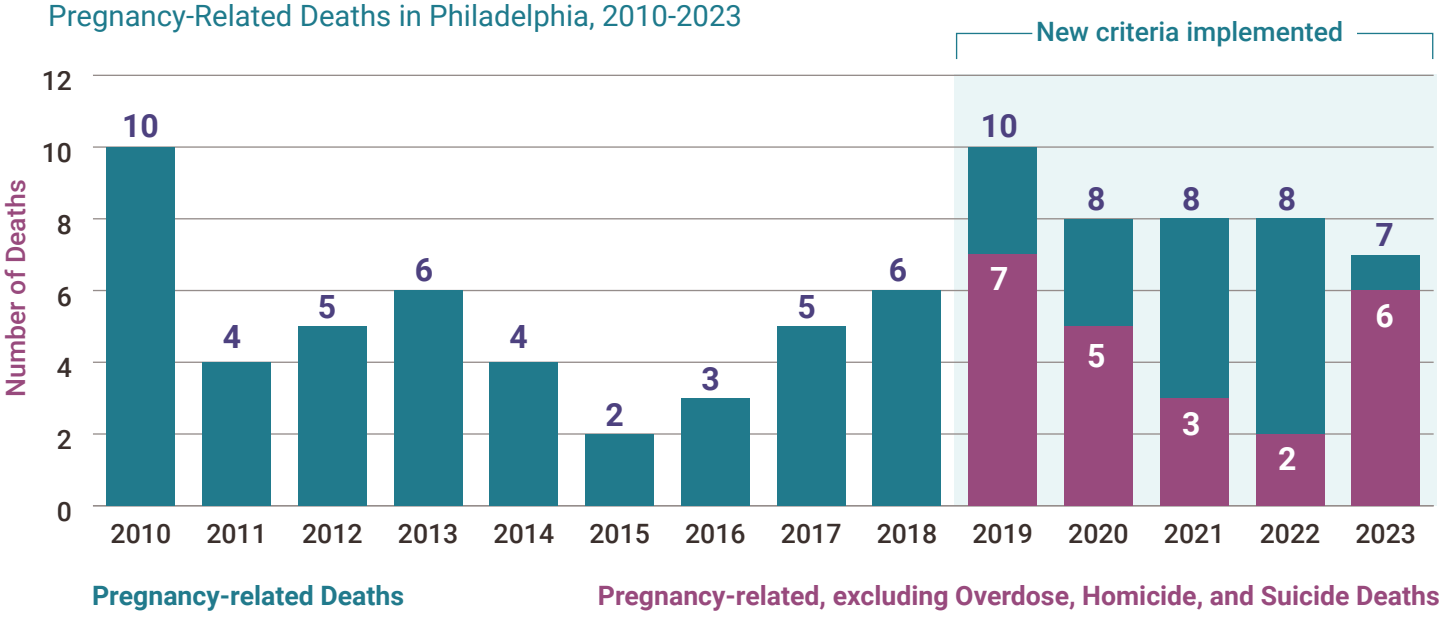
# Pregnancy-Related Deaths Over Time

In 2019, the Philadelphia MMRC adopted new guidelines for determining whether deaths due to unintentional drug overdose, suicide, or homicide are pregnancy-related. Before 2019, deaths with these causes were always considered pregnancy-associated but not related. The CDC, in partnership with representatives from MMRCs in 48 different jurisdictions across the country, developed criteria for evaluating the pregnancy-relatedness of overdose and suicide deaths.[2]

The Philadelphia MMRC also chose to adapt these criteria for the review of homicide cases.

Including these types of deaths in conversations about pregnancy-related mortality provides a fuller picture of the ways in which pregnancy and parenting can impact a person's overall health, and these cases have led to many MMRC recommendations to improve maternal mental health and safety.

Pregnancy-Related Deaths in Philadelphia, 2010-2023



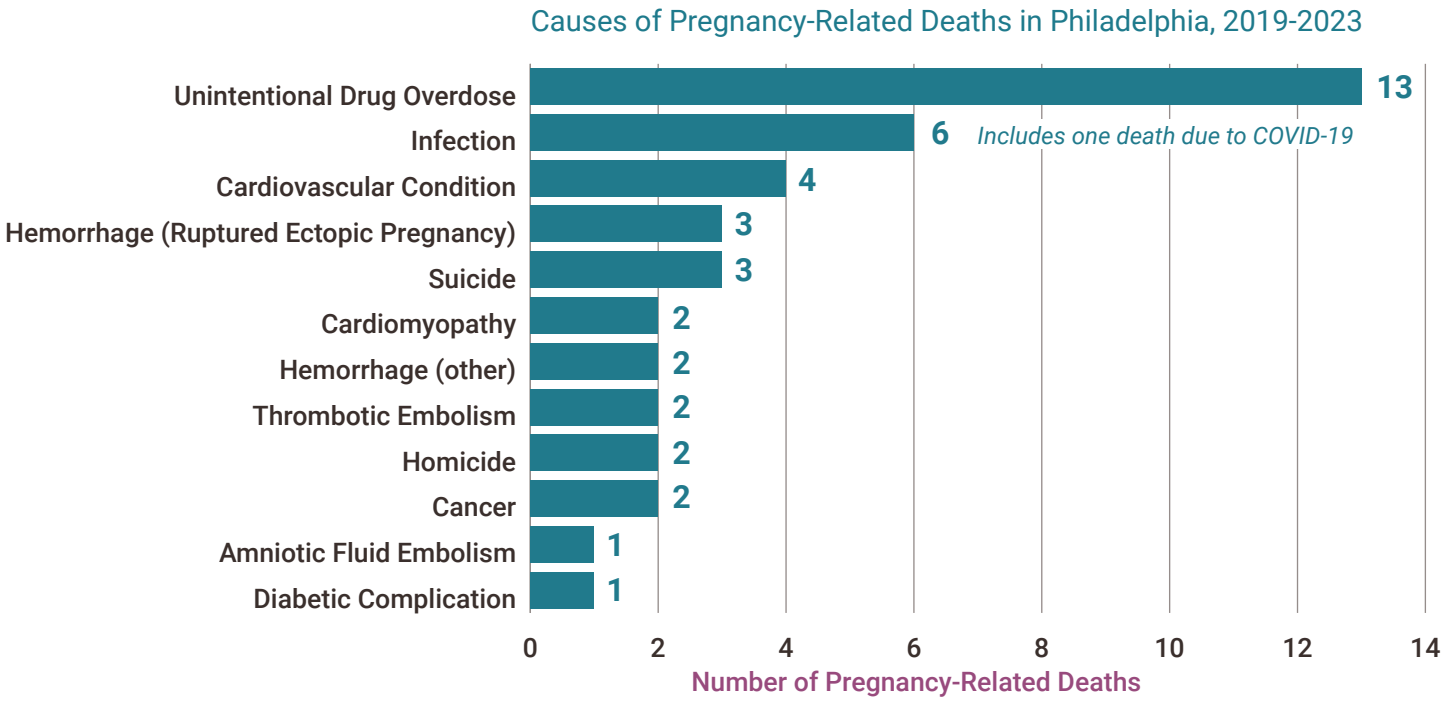

» From 2019 to 2023, there were 41 cases of pregnancy-related death in Philadelphia, or an average of about 8 deaths per year. This appears as an increase from the previous 5-year period (20 pregnancy-related deaths from 2014-2018); however, this change is primarily driven by the inclusion of overdose, suicide, and homicide deaths within pregnancy-related deaths beginning in 2019.

» If overdose, suicide, and homicide deaths are excluded (as would have been the case before 2019), there were 23 cases of pregnancy-related death in this time period, or an average of 4-5 cases per year. This is consistent with the observed trend from 2011 to now.

» The pregnancy-related mortality ratio (PRMR), which is the number of pregnancy-related deaths per 100,000 live births, was 42.2 in Philadelphia from 2019 to 2023.

- If overdose, suicide, and homicide deaths are excluded, the PRMR in Philadelphia during this time period was 23.7 deaths per 100,000 live births. This represents an increase from the previous 5-year time period (2014-2018), in which the PRMR in Philadelphia was 18.6 deaths per 100,000 live births.

# Causes of Pregnancy-Related Deaths




» **Unintentional drug overdose** was the leading cause of pregnancy-related death in Philadelphia from 2019 to 2023, accounting for about one-third of all pregnancy-related deaths.

» **Infection** was the second leading cause of pregnancy-related death, accounting for 15% of cases. Among cases of pregnancy-related death due to infection, one case was caused by COVID-19 infection.

» **Cardiovascular conditions** were the third leading cause of pregnancy-related death, accounting for 10% of cases. Cardiovascular conditions include problems such as cardiomyopathy, hypertensive disorders, and arrhythmias.

» There were 3 cases of **hemorrhage** due to ruptured ectopic pregnancy and 2 cases of hemorrhage due to other causes. Of note, there were no cases of fatal postpartum hemorrhage related to delivery during this time period.

These local trends differ slightly from data reported at the national level.

» Based on data from 46 MMRCs across the US, the leading cause of pregnancy-related deaths at the national level in 2021 was infection (33.2% of cases). This observation was driven mainly by the COVID-19 pandemic (which accounted for 27.7% of all deaths).[3]

» In 2021, at the national level, mental health conditions (including substance use disorder) were the second leading cause of pregnancy-related death (22.5% of deaths), and cardiovascular conditions were the third leading cause (10.4% of deaths).[3]

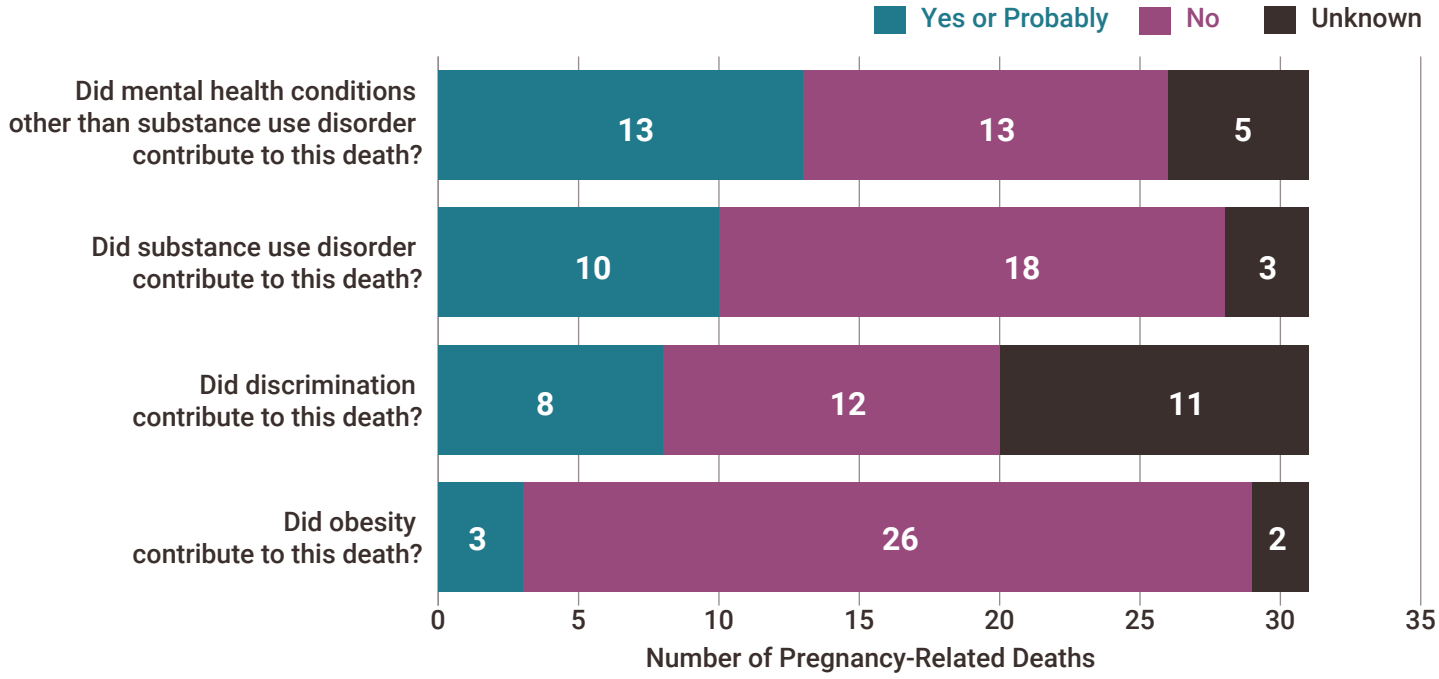
# Contributing Factors to Pregnancy-Related Deaths

The MMRIA Committee Decision Form (the CDC guideline for reviewing pregnancy-associated deaths) asks MMRCs to determine whether discrimination, Substance Use Disorders (SUD), or other mental health conditions contributed to the circumstances that caused the death. MMRC members can indicate "Yes," "Probably," "No," or "Unknown" for each factor.

*Note: This figure only includes cases from 2020-2023, since the Philadelphia MMRC began using the MMRIA Committee Decision Form in 2020. Pregnancy-related death cases that occurred in 2019 or prior do not have documented committee decisions regarding these contributing factors.*

## Contributing Factors to Pregnancy-Related Deaths in Philadelphia, 2020-2023

*Number of Pregnancy-Related Deaths (N = 31)*




- The Philadelphia MMRC determined that a **mental health condition** other than SUD was likely a contributing factor in 42% (13 out of 31) of all pregnancy-related deaths for which a MMRIA Committee Decision form was completed.
- **SUD** was determined to be a contributing factor in 32% (10 out of 31) of cases. Cases in which SUD is a contributing factor are not always overdose death cases. SUD impacts many aspects of a person's health and can directly contribute to other causes of death besides overdose, such as infection.
- **Discrimination** was determined to be a contributing factor in 26% (8 out of 31) of cases. The MMRC considers many forms of discrimination when making this determination, such as discrimination based on race, ethnicity, mental health status, or insurance status.
- **Obesity** was only determined to be a contributing factor in 10% (3 out of 31) of cases.

# Deaths due to Unintentional Drug Overdose

**In Philadelphia and across the US, unintentional drug overdose deaths increased dramatically during the time period covered in this report[4]. Locally, Philadelphia observed a rise in accidental overdose deaths over the time period of this report, with a peak of 1,413 deaths observed in 2022.[5]**

The contributing factors associated with overdose deaths are complex and varied. In 2019, the Philadelphia MMRC began considering how overdose deaths may be related to a person's experience with pregnancy, delivery, or the postpartum period. (Before 2019, these deaths were always considered to be *pregnancy-associated but NOT pregnancy-related*).

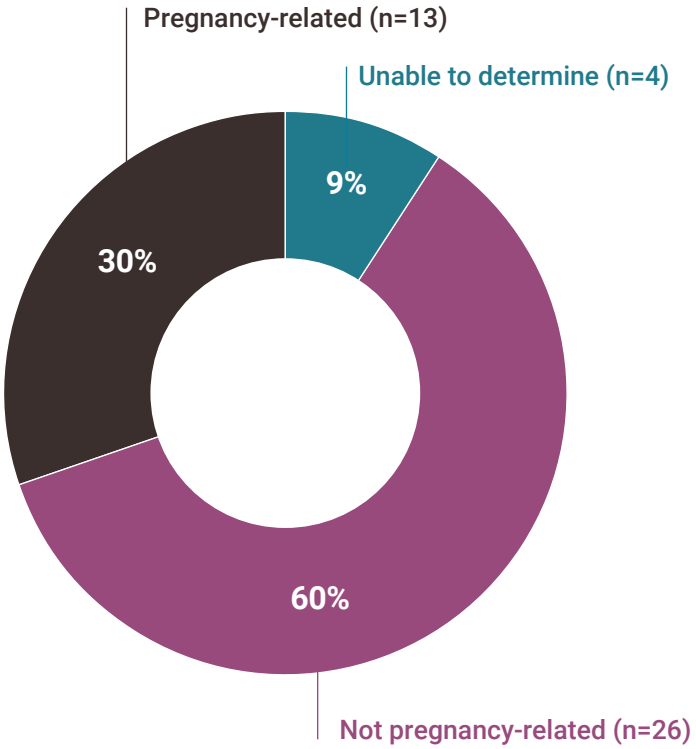
By considering these deaths as potentially pregnancy-related, the MMRC can enhance our understanding of the complex ways that pregnancy impacts a person's life and develop targeted strategies for supporting healthy pregnancies among people who have or are at risk of SUD.

## What makes an overdose death *pregnancy-related*?

To determine the pregnancy-relatedness of an overdose death, the MMRC applies a set of criteria developed by perinatal health professionals at the University of Utah and adopted by the CDC for maternal mortality review.[2] The criteria can be applied to the review of overdose deaths as well as suicide deaths. The criteria are organized into three categories:

| | | |
|---|---|---|
| 1. | **Pregnancy Complications:** | This category assesses instances where increased pain directly associated with pregnancy or postpartum events leads to self-harm or drug use resulting in suicide or accidental death. It also includes traumatic events during pregnancy or postpartum with a clear temporal link to self-harm or escalated drug use, as well as pregnancy-related complications likely exacerbated by drug use, culminating in death. |
| 2. | **Chain of Events Initiated by Pregnancy:** | This category examines events initiated by pregnancy itself, such as the cessation or attempted tapering of medications due to pregnancy-related concerns, which can lead to maternal destabilization or drug use resulting in death. Additionally, it considers situations where pregnant individuals face challenges in accessing SUD or mental health treatment, perinatal mental health issues leading to destabilization or drug use, and cases in which substance use disorder recovery or stabilization during pregnancy or postpartum subsequently results in relapse and death. |
| 3. | **Aggravation of Underlying Conditions by Pregnancy:** | This category investigates the aggravation of pre-existing conditions, including depression, anxiety, or other psychiatric conditions, during pregnancy or the postpartum period. It examines documented instances where mental illness leads to drug use or self-harm, as well as cases where pre-existing conditions are exacerbated, undertreated, or delayed in treatment, subsequently leading to the use of drugs, self-harm, or suicide, resulting in death. Additionally, it considers medical conditions secondary to drug use in the context of pregnancy or postpartum, which may be attributed to pregnancy-related physiology and increased risk of complications leading to death. |

## Pregnancy-Relatedness of Drug Overdose Deaths for all people who died during pregnancy or up to 1 year after in Philadelphia, 2019-2023




*Note: Percentages may not add up to 100% due to rounding.*

» From 2019 to 2023, there were 43 cases of pregnancy-associated drug overdose death in Philadelphia.

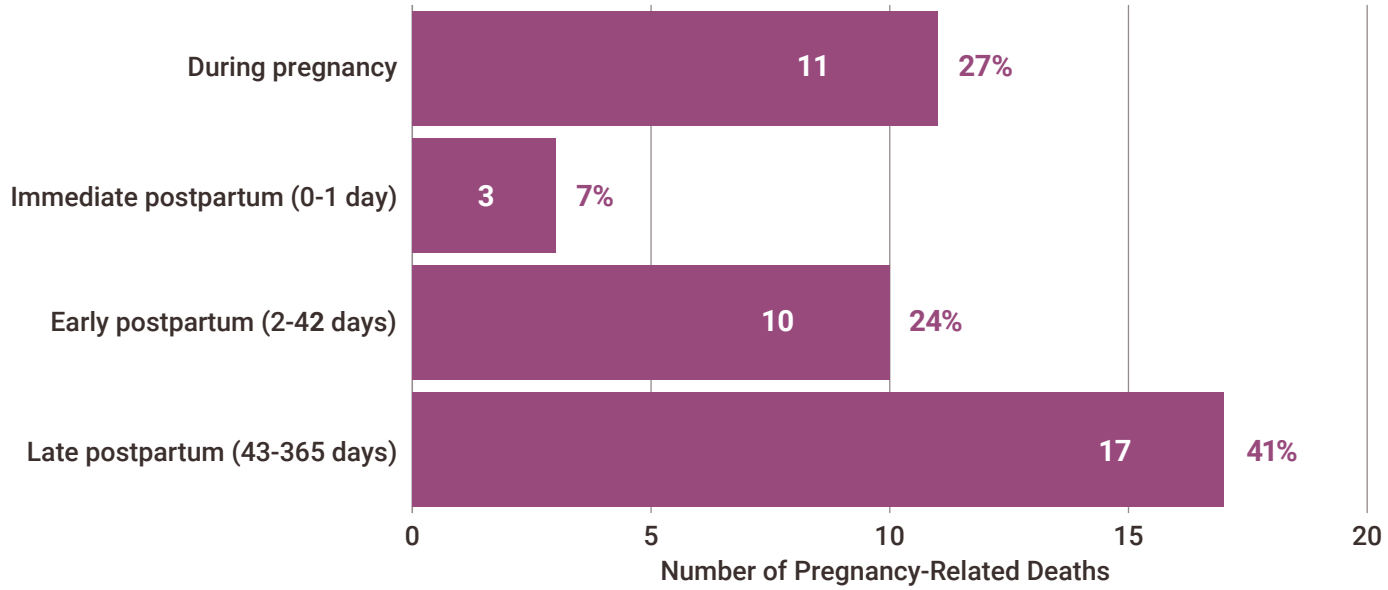
- The most commonly involved drug classes were opioids (90.7% of cases) and stimulants (51.2% of cases). Most people (78.6%) had more than one drug class in their system at the time of death.

» Applying the criteria above, the MMRC determined that 30% (13 out of 43) of drug overdose deaths in this time period were pregnancy-related.

Including these cases in our analysis of pregnancy-related deaths dramatically expands our understanding of maternal mortality in Philadelphia. Before 2019, these cases would not have been included in data and discussions about pregnancy-related mortality. Consideration of these 13 cases offers valuable insight into the circumstances around perinatal drug overdose — the leading cause of pregnancy-related death in Philadelphia in this time period — and highlights the urgency of this issue and the need for interventions to prevent these types of deaths in the future.

# Timing of Pregnancy-Related Deaths

Timing of Pregnancy-Related Deaths in Philadelphia, 2019-2023




*Note: Percentages may not add up to 100% due to rounding.*

» 73% of pregnancy-related deaths occurred in the postpartum period. The largest proportion (41%) of pregnancy-related deaths happened in the late postpartum period, between 43 and 364 days after the end of the pregnancy. This finding highlights the need to provide support to birthing people through the first year postpartum.

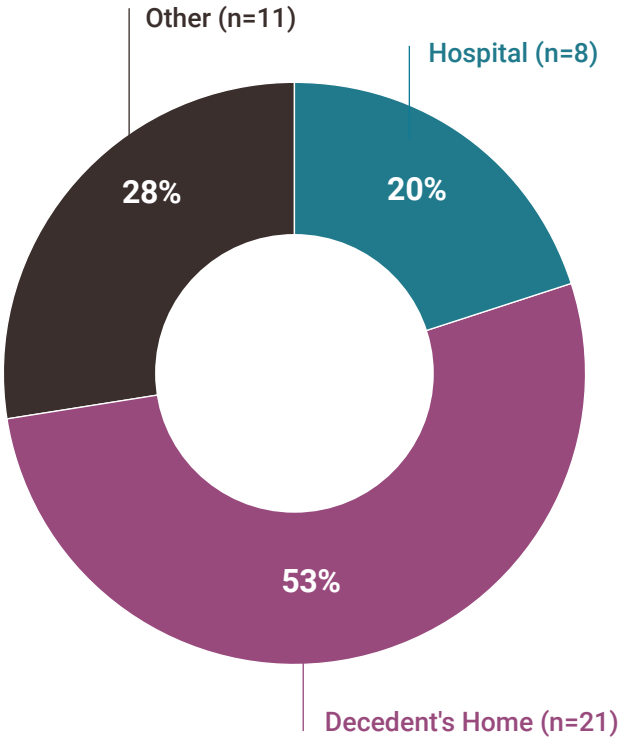
» The most common causes of death in the late postpartum period were drug overdose and cardiovascular problems.

» This is slightly different from the trends observed at the national level. In the US in 2021, the largest proportion of pregnancy-related deaths occurred in the early postpartum period (29.2%), and 28.1% occurred in the late postpartum period.[3]

# Location of Terminal Events Leading to Pregnancy-Related Deaths

**A "terminal event" is the incident that ultimately leads to death, for example, having a heart attack or being injured. The location of a terminal event may be different from the location where the death occurred, most often because the person was taken to a hospital after the event.**

Location of Terminal Event Leading to Pregnancy Related Death in Philadelphia, 2019-2023

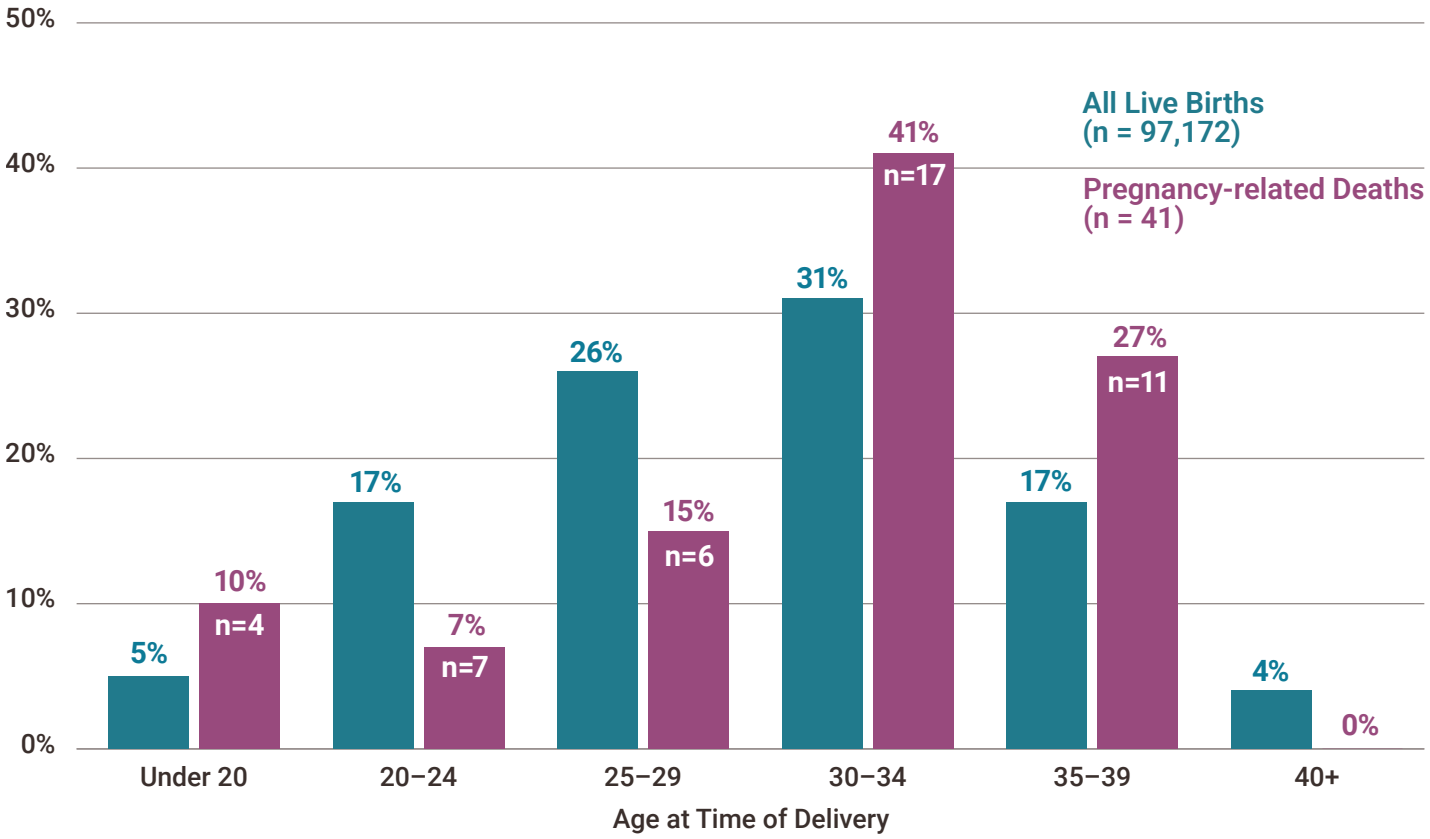



- 53% of terminal events that led to a pregnancy-related death occurred in the decedent's home. Examples of terminal events that might happen at home are pregnancy complications like a ruptured ectopic pregnancy, cardiovascular emergencies, sustaining an injury, or experiencing a drug overdose.
- 28% of terminal events occurred outside the hospital in a location other than the decedent's home, such as a friend's home or a public place.
- Not all pregnancy-related deaths have an identifiable terminal event. For example, if someone dies from cancer, there is usually no single inciting event that is linked to the death.

*Notes: Excludes cases in which no terminal event was identified. Percentages may not add up to 100% due to rounding.*

# Pregnancy-Related Deaths by Age

Percent of all live births and pregnancy-related deaths by age in Philadelphia, 2019-2023




*Note: Percentages may not add up to 100% due to rounding.*

- People aged 30-34 years at the time of delivery accounted for the largest proportion (41%) of pregnancy-related deaths in Philadelphia from 2019-2023. This age group accounts for only 31% of all live births.
- People under age 20 and those aged 35-39 were also overrepresented among pregnancy-related deaths during this time period.
- People in their 20s (aged 20-24 or 25-29 at the time of delivery) accounted for 43% of all live births and only 22% of pregnancy-related deaths.
- During this time period, there were no pregnancy-related deaths among people over age 40. This population is typically overrepresented among pregnancy-related deaths and accounted for 15% of pregnancy-related deaths from 2013 to 2018. Birthing people over age 40 account for a small percentage of all live births (4%), so even a small number of deaths in this age group translates to a significant proportional representation among pregnancy-related deaths.

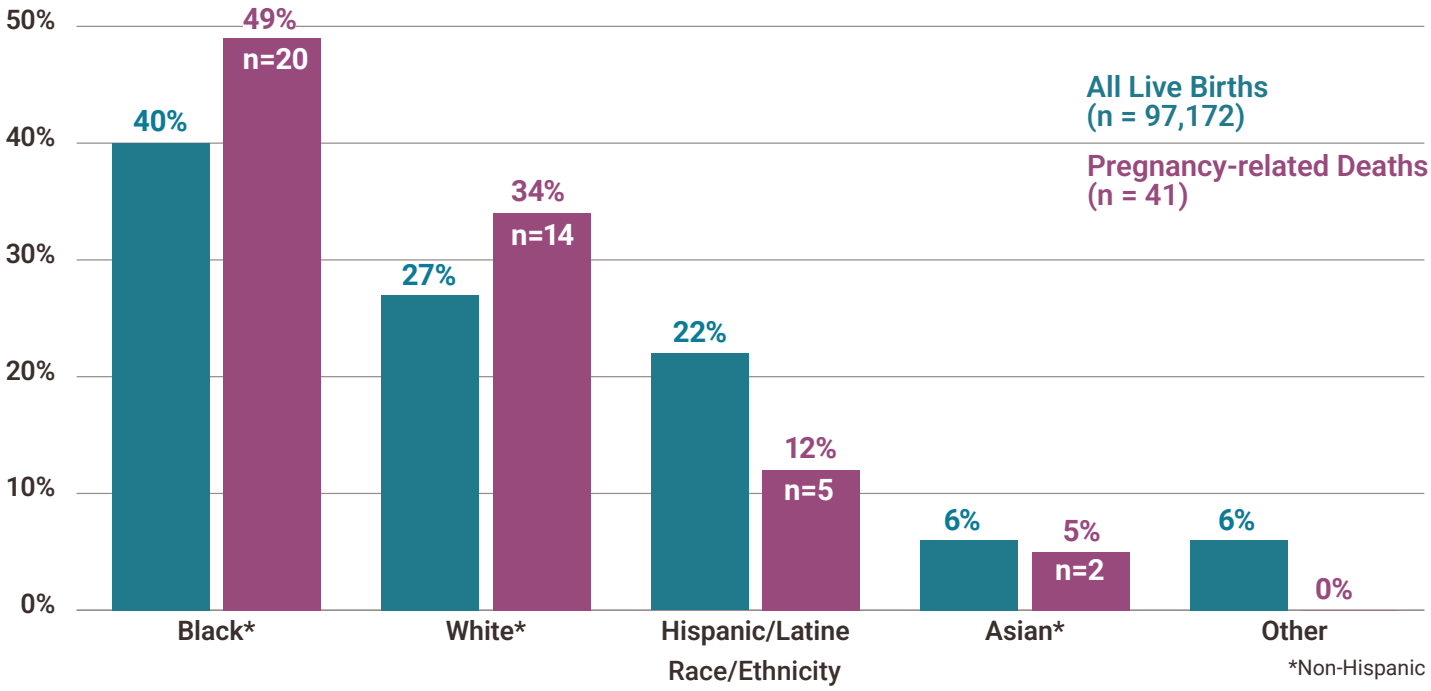
# Pregnancy-Related Deaths by Race/Ethnicity

*Note – In this section, Non-Hispanic Black and Non-Hispanic White populations will be referred to as "Black" and "White" for simplicity.*

In Philadelphia and across the US, racial disparities in maternal and infant health outcomes persist. While these disparities were not observed in pregnancy-related death data for this time period, previous years of data have shown a disproportionate burden of mortality among Black Philadelphians.

Racial disparities are also consistently present in Philadelphia among other key maternal and infant health outcomes, such as severe maternal morbidity[6] and infant mortality.[7] More years of data are needed to understand the causes of this shifting trend in Philadelphia.

Percent of all live births and pregnancy-related deaths by race/ethnicity in Philadelphia, 2019-2023




*Note: Percentages may not add up to 100% due to rounding.*

» From 2019-2023, both Black and White birthing people were over-represented among pregnancy-related deaths in Philadelphia. Black birthing people accounted for 40% of all live births and 49% of pregnancy-related deaths, and White birthing people accounted for 27% of all live births and 34% of pregnancy-related deaths.

- The PRMR for Black Philadelphians was 51.7 deaths per 100,000 live births, and the PRMR for White Philadelphians was 57.7 deaths per 100,000 live births.

» Due to the inclusion of overdose, homicide, and suicide deaths in this report, it is difficult to compare the data below to previous years. These types of deaths accounted for over half (57%) of all pregnancy-related deaths among White people, and 40% of all pregnancy-related deaths among Black people.

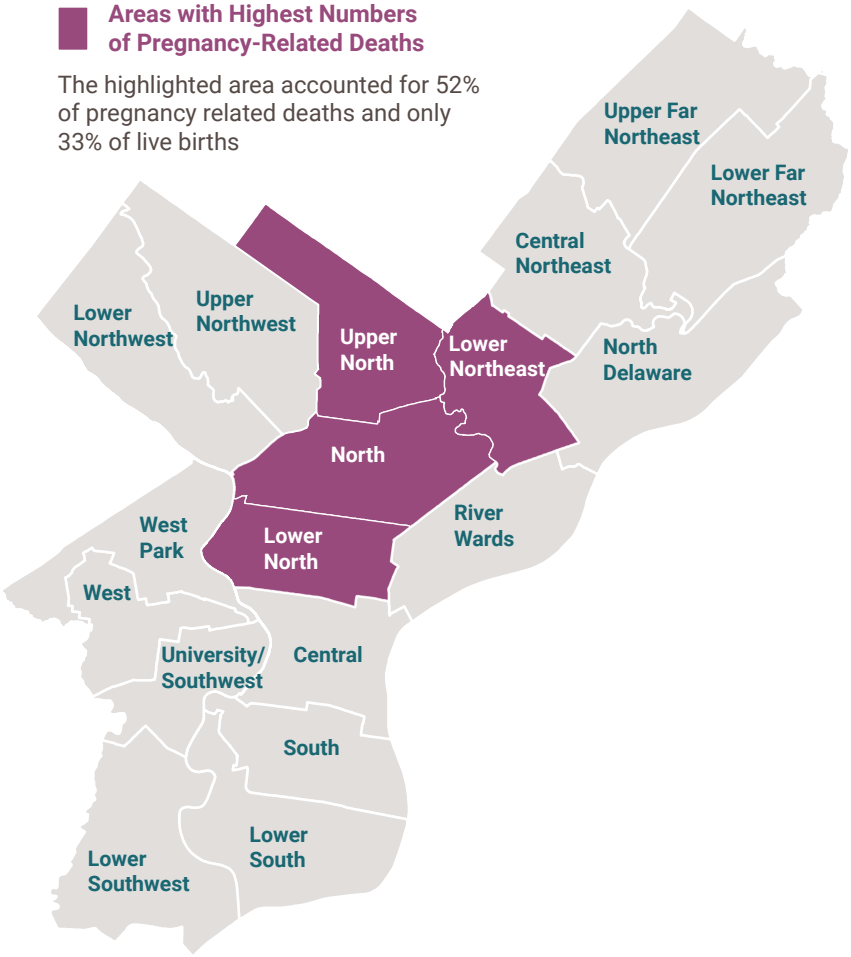
**Due to small numbers, racial disparities in pregnancy-related mortality among Asian and Hispanic birthing people in Philadelphia cannot be reliably calculated for this time period.*

# Geography of Pregnancy-Related Deaths

## Philadelphia Planning Districts with the Most Pregnancy-Related Deaths, 2010–2023

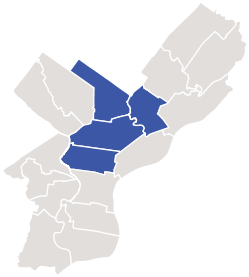
**Areas with Highest Numbers of Pregnancy-Related Deaths**

The highlighted area accounted for 52% of pregnancy related deaths and only 33% of live births



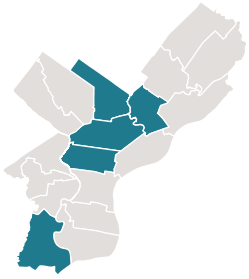

**Areas with Highest Poverty Rate**

>30% of the population in 2020



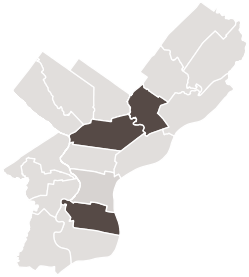
**Areas with Highest Unemployment Rate**

≥12% of the population in 2020



**Areas with Highest Rate of People without Health Insurance**

>10% of the population in 2020

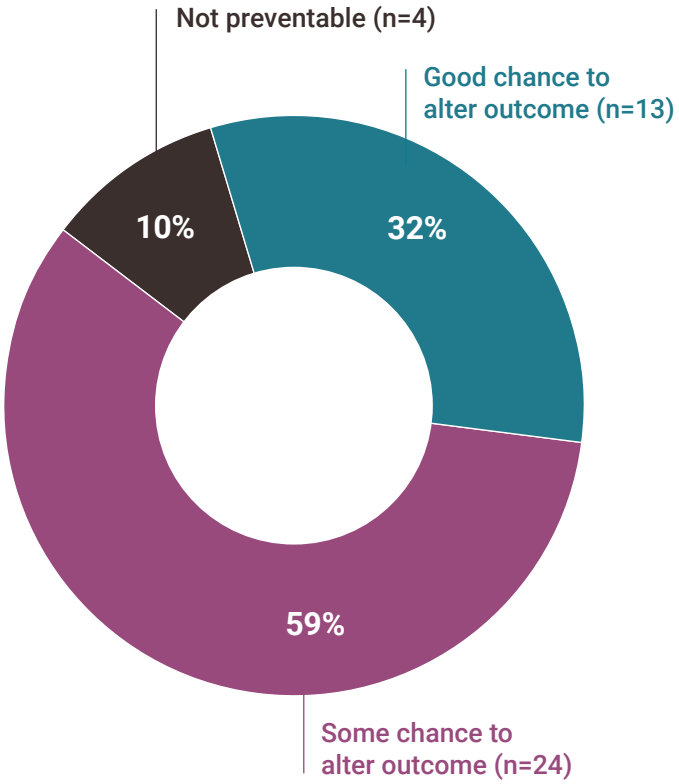


- From 2010 to 2023, 52% of people who died from pregnancy-related causes lived in a geographic region in North Philadelphia that accounted for only 33% of all live births during this time period.
- Communities in and around North Philadelphia, which experience a disproportionate burden of pregnancy-related mortality, tend to have poorer social determinants of health compared to the rest of the city. These neighborhoods are among those with the highest poverty rates, unemployment rates, and rates of people without health insurance.
- *Social Determinants of Health* are defined as the conditions in which people are born, grow, work, live, and age.[8] These factors also influence the environments in which people experience pregnancy, birth, and the postpartum.

# Preventability of Pregnancy-Related Deaths

**In reviewing cases of pregnancy-related death, the MMRC considers whether the death was preventable. A death is considered preventable if there was at least some chance that the death could have been averted by one or more reasonable changes to patient, family, provider, facility, system, and/or community factors.**[3]

Preventability of Pregnancy-Related Deaths in Philadelphia, 2019-2023



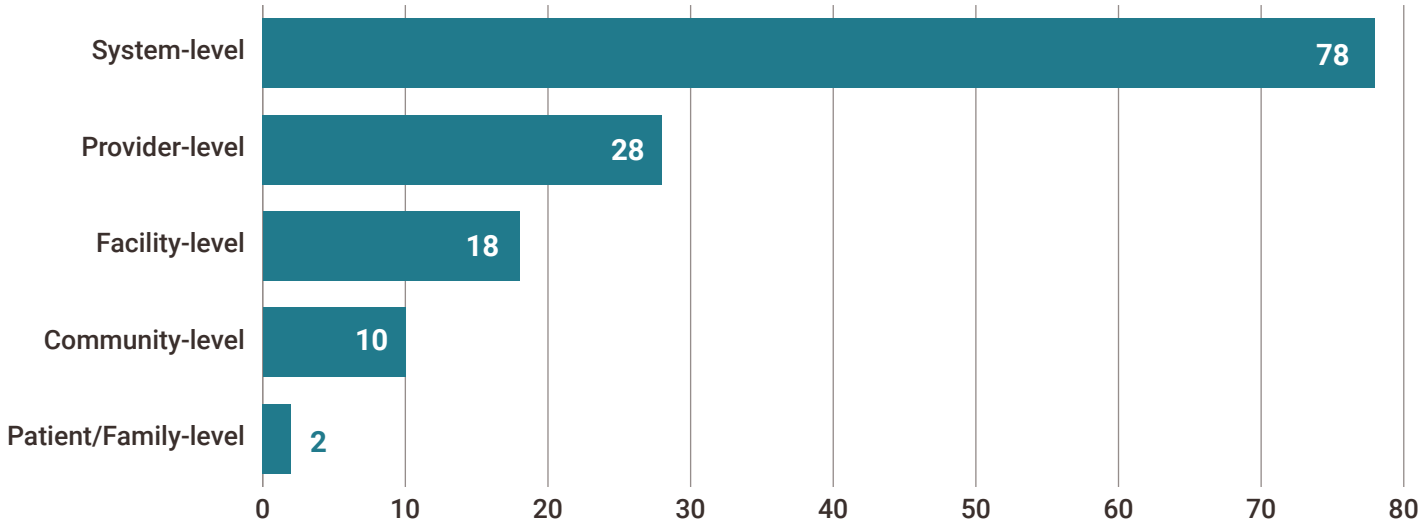

- The Philadelphia MMRC determined that 90% of pregnancy-related deaths during this time period were preventable, with 32% of cases having had a good chance to alter the outcome and prevent the death.
- The MMRC's preventability determination takes into account the whole environment in which the pregnancy and postpartum period occurred. *This determination does not assign blame to any one person or group of people. It seeks to understand the complex array of systemic factors that lead to a pregnancy-related death.*

*Note: Percentages may not add up to 100% due to rounding*

# MMRC Recommendation Levels

**In cases of preventable pregnancy-related deaths, the MMRC collectively makes recommendations to address the patient, family, provider, facility, system, and/or community level factors that could have prevented the death, and which would prevent future similar deaths.**

Philadelphia MMRC Recommendations to Prevent Pregnancy-Related Deaths, 2020-2023




*Note: These data do not include the recommendations made by the Philadelphia MMRC for 2019 cases, as the committee began using the standardized MMRIA Committee Decision Form when reviewing 2020 cases.*

» Overall, the MMRC made 136 specific recommendations to prevent pregnancy-related death based on its review of 31 pregnancy-related deaths from 2020-2023.

» Over half (57%) of the MMRC's recommendations targeted system-level issues. System-level recommendations aim to change the overall environment in which people experience pregnancy, birth, and the postpartum period. These recommendations identify opportunities to address structural factors that inhibit patients, providers, facilities, and communities from experiencing and contributing to healthy pregnancies and parenthood.

» For more information about the MMRC's recommendations, see pages 21–35.

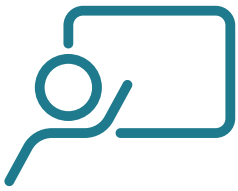
# RECOMMENDATIONS

Philadelphia continues to face persistent challenges in maternal health, driven by the intersecting impacts of chronic medical conditions, behavioral health needs, social stressors, and long-standing community mistrust. To respond effectively, the maternal health system must move beyond fragmented interventions and embrace a coordinated approach that addresses the full spectrum of risks across pregnancy, childbirth, and the postpartum period.

All the recommendations that follow were developed by the Philadelphia MMRC and reflect the collective expertise of clinicians, community leaders, public health professionals, behavioral health providers, social service partners, and individuals with lived experience. Together, they outline a multi-tiered strategy to strengthen clinical care, enhance cross-system coordination, integrate behavioral health supports, and rebuild trust between communities and health care institutions.

## Recommendation Categories

To promote clarity and consistency, each recommendation is categorized into one of the following areas:



### Training & Education:

Build the knowledge, skills, and capacity of professionals and community members to provide effective, respectful, and timely support. This includes workforce development, curricula, continuing education, and community-wide education efforts.

### Care Delivery:

Strengthen systems, protocols, and practices that shape service delivery to ensure coordinated, person-centered care. This includes clinical workflows, care transitions, interdisciplinary models, screening and follow-up processes, and integration across health care and social services.

### Policy & Investment:

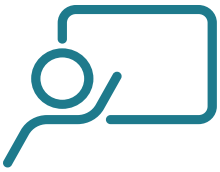
Advance policies, regulations, and resource allocation strategies that expand access, promote fairness, and sustain effective programs. This includes legislation, regulatory changes, funding models, reimbursement structures, and public-sector investments.

## GOAL 1:
# Develop Behavioral Health Systems to Meet the Specific Needs of Pregnant and Postpartum People with Substance Use Disorder (SUD)

**Unintentional drug overdose is the leading cause of pregnancy-related mortality in Philadelphia.**

This section focuses on strengthening behavioral health systems that meet the unique needs of pregnant and postpartum individuals with SUD, including improved workforce capacity, integrated care, stigma reduction, treatment access, and supportive policies.

> "I just think the whole system itself is flawed. Treatment programs are not designed to get someone off drugs [...] I feel like the system failed her."
>
> —Key Informant Interview, Decedent's Mother



## Training & Education

**Health care systems should:**

- Provide consistent education for obstetric and hospital staff on SUD in pregnancy, including proper screening tool use and legal/ethical considerations (consent, confidentiality, child welfare involvement).
- Train social workers and hospital staff on the appropriate use of the Prescription Drug Monitoring Program (PDMP) when interpreting positive drug screens.
- Offer continuing education on harm reduction, perinatal SUD care, and evidence-based treatment.

**Substance use treatment providers should:**

- Train all staff in best practices for treating pregnant and postpartum individuals with SUD.

**Child welfare agencies and family courts should:**

- Provide regular implicit bias and trauma-informed care training focused on perinatal SUD and stigma reduction.

**Health insurance providers should:**

- Train health care providers and administrative staff on coverage options for perinatal SUD services.

## Care Delivery

**Health care systems should:**

- Develop follow-up outreach protocols after ED, OB triage, or inpatient stays—including self-directed discharges—with automatic referrals to home visiting or case management.
- Implement integrated care models combining obstetric, SUD, mental health, and social supports, including peer recovery specialists on care teams.
- Launch stigma-reduction initiatives across care settings.
- Integrate perinatal-focused addiction medicine consultation services into workflows at all hospitals.

**Obstetric providers should:**

- Provide universal naloxone prescribing and education for pregnant and postpartum individuals at risk of overdose.
- Adopt patient-centered, consent-based urine drug testing guidelines.
- Offer fentanyl test strips to individuals who disclose substance use.

**Substance use treatment facilities should:**

- Offer perinatal-specific services (prenatal care, parenting support, childcare).
- Provide flexible treatment models (outpatient, intensive outpatient, residential, and mother–baby programs).
- Ensure access to best-practice medication for opioid use disorder (MOUD) treatment during pregnancy and postpartum.

**Child protective services should:**

- Implement closed-loop referral systems with health care providers and community umbrella organizations.
- Connect families to residential mother–baby programs that prevent separation and support recovery.

## Policy & Investment

**City and state agencies should:**

- Invest in integrated programs combining obstetrics, mental health, SUD treatment, and family supports.
- Expand funding for family-friendly residential programs, supportive housing, and dual-diagnosis care.
- Provide peer and community support systems for health care professionals serving pregnant and postpartum individuals with SUD.

**Regulatory agencies should:**

- Prohibit treatment program expulsions for non-adherence and require supportive retention policies.
- Establish perinatal SUD advisory boards with regular policy review.

**Family courts and child protective services should:**

- Standardize and increase transparency around custodial decision-making in perinatal SUD cases.
- Partner with perinatal SUD experts to align policies with current best practices.

**Health insurance providers should:**

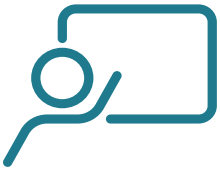
- Reimburse peer support services during the peripartum period.
- Cover transitional supports (case management and recovery coaching) for postpartum individuals returning to the community.

## GOAL 2:
# Improve Infrastructure for Mental Health Care and Promote Integration into Maternal Health Care Delivery Systems

**Perinatal mental health conditions are among the most common complications of pregnancy and postpartum.**

This section emphasizes the need for integrated, culturally responsive mental health care—including embedding mental health professionals in obstetric settings, improving screening and follow-up, and expanding trauma-informed supports.

> "I just feel like with the postpartum, there was stigma attached to that. It wasn't discussed [by her doctor] as openly as it should've been. Women don't know [postpartum depression] is as common as it is."
>
> —Key Informant Interview, Decedent's Fiancé



### Training & Education

**Colleges, universities, and mental health training programs should:**

- Partner with health care facilities to offer clinical rotations, internships, and residency placements focused on perinatal mental health.
- Provide continuing education and certification opportunities in perinatal mental health.
- Develop a representative perinatal mental health workforce that reflects the demographic makeup of Philadelphians through scholarships, financial support, and targeted recruitment.
- Integrate curricula addressing the mental health needs of diverse perinatal populations, including individuals impacted by poverty, immigration stress, LGBTQ+ identity, and other stressors.

**Medical, nursing, and midwifery schools should:**

- Provide specialized training on safe prescribing and medication management for perinatal mental health conditions.
- Teach practical approaches for eliciting mental health histories and identifying, diagnosing, and managing common perinatal mental health conditions.

**Obstetric providers should:**

- Incorporate mental health education into prenatal and postpartum care, including early warning signs and when to seek help

**Community-based organizations should:**

- Reduce mental health stigma by engaging communities, elevating lived experience, and partnering with trusted community leaders to normalize conversations around mental health.

"I think it's just important to highlight what the doctor told her about the baby's health being more important than the mother's mental health. I'm sure there's other medications they could've put her on that would've been not harmful [...] If she is not healthy enough to care for herself, she is not healthy enough to care for the baby."

—Key Informant Interview, Decedent's Partner

## Care Delivery

**Obstetric providers, mental health providers, health systems, and health insurance companies should work together to:**

- Connect individuals experiencing adverse pregnancy outcomes (e.g., miscarriage, stillbirth, maternal morbidities, preterm delivery, postpartum readmissions, and birth trauma) to trauma-informed mental health support.
- Ensure systematic follow-up for individuals who screen positive for mental health concerns, including timely referral and coordinated care.
- Develop integrated care models embedding mental health specialists within obstetric teams.
- Expand telehealth and digital tools to increase access to screening, consultation, and therapy.

**The health care system should:**

- Collaborate with city/state agencies, insurers, and mental health and obstetric providers to reduce barriers to integrating physical health, behavioral health, and social services.
- Ensure consistent, high-quality maternal mental health services across settings and address gaps and inequities in access.

**Community-based organizations should:**

- Establish referral partnerships with local health care facilities to support timely access to maternal mental health services.

## Policy & Investment

**The Commonwealth should:**

- Revise privacy laws to support appropriate information-sharing between physical and behavioral health providers.
- Reduce regulatory and administrative barriers to integrating mental and physical health care.
- Prioritize funding and resource allocation to sustain perinatal mental health resources, including the Perinatal Telephonic Psychiatric Consultation Service (TiPS) program.

**Health insurance companies should:**

- Implement reimbursement models that support integrating mental health professionals into perinatal care teams.
- Create incentive programs that promote culturally responsive, high-quality perinatal mental health care.
- Reimburse peer counselors, community mental health workers, and support groups specializing in maternal mental health.

**City and state agencies should:**

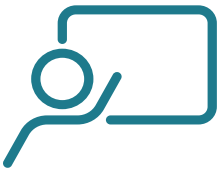
- Use data-driven strategies to monitor and evaluate maternal mental health programs.
- Allocate funding for perinatal mental health services, public health campaigns, treatment programs, and research.
- Invest in workforce development to increase the number of trained maternal mental health providers—especially in underserved areas.
- Support public-private partnerships to leverage shared resources and expertise.

## GOAL 3:
# Optimize Coordination and Continuity of Care Across Health Care and Social Service Settings

**Many maternal deaths occur outside of the health care setting and during transitions of care.**

This section focuses on strengthening coordination between obstetric care, primary care, emergency departments, emergency medical services (EMS), specialty care, and social services to prevent gaps in care—especially after ED visits, at hospital discharge, during postpartum transitions, and in between pregnancies.

> "I feel that she just needed help. The system needs to support these mothers [...]. If she had easier options for childcare or time off work [...], maybe she would have taken better care of herself. She was so stressed about making money and providing for her children that she couldn't provide for herself."
>
> —Key Informant Interview, Decedent's Mother



### Training & Education

**Obstetric providers and staff, with support from health care systems and insurers, should:**

» Receive training on screening for unmet social needs—including intimate partner violence (IPV), housing instability, food insecurity, and transportation barriers—and making appropriate referrals.

**City and state agencies should:**

» Train and deploy community health workers to help individuals navigate the health care and social service systems and ensure needs are met across settings

## Care Delivery

**Obstetric providers and staff, with support from health care systems, should:**

- Establish and implement clear protocols for transitioning care from obstetric providers to primary care after the postpartum period, ensuring timely communication of relevant health information.
- Ensure prenatal care is accessible at all stages of pregnancy, from early detection to late third-trimester entry, to support timely intervention.
- Schedule postpartum follow-up visits, primary care appointments, and relevant specialist referrals before discharge from the delivery hospitalization to reduce missed appointments and care gaps.
- Conduct screenings for unmet social needs throughout pregnancy, delivery, and postpartum, and make timely referrals to community-based and social service partners.
- Work with insurers, community organizations, and city agencies to establish systematic follow-up protocols that ensure social needs referrals lead to actual services and resolution of concerns.

**Health care systems should:**

- Implement the Alliance for Innovation on Maternal Health (AIM) Postpartum Discharge Transition Bundle to strengthen immediate postpartum transitions to outpatient obstetric care, specialist care, and community supports.
- Adopt collaborative care models that integrate obstetric services with primary care, mental health care, and social services.
- Ensure postpartum individuals are allowed to bring their infants when seeking care in emergency departments or OB triage units to reduce barriers to urgent care.

**Community-based organizations should:**

- Partner with health care systems to create streamlined referral pathways and facilitate access to social services, home visiting, and community supports.

## Policy & Investment

**Health insurance companies should:**

- Invest in and reimburse for interoperable electronic health records, care coordination platforms, and digital tools that improve communication across health care and social service providers.
- Incentivize care models that integrate obstetric care with primary care, mental health services, and social supports.
- Reimburse case conferences, multidisciplinary consultations, and coordinated care planning.
- Reimburse for care navigators or patient advocates who support individuals in accessing services, coordinating appointments, and navigating social care needs.

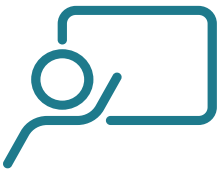
**City and state agencies should:**

- Support collaborations between health care providers and community organizations to extend care beyond clinical settings.
- Strengthen the city's domestic violence hotline to include appointment scheduling (i.e., prenatal care, WIC), real-time housing assistance, and warm hand-offs to supportive services.
- Create and publicize centralized information hubs—digital or community-based—where pregnant and postpartum individuals can access comprehensive information on health care services, appointment support, and social services navigation.

## GOAL 4:
# Improve the Understanding and Recognition of Pregnancy-Related Risks and Complications Across Non-Obstetric Health Care Environments and the Larger Community

**The need for heightened awareness about pregnancy-related risks and complications extends beyond obstetric care into broader health care environments and community settings.**

This section aims to improve the ability of emergency departments, urgent care, primary care, EMS, schools, community organizations, and the public to recognize early warning signs, respond effectively, and facilitate timely access to maternal care.



### Training & Education

**Health care systems should:**

- Provide targeted educational programs for emergency departments and urgent care centers on the unique aspects of pregnancy and postpartum-related emergencies.
- Conduct regular training for providers on the effective use of clinical decision aids to improve diagnostic accuracy and treatment for pregnant and postpartum individuals.
- Offer clear guidance and training for primary care and emergency room staff on managing early pregnancy complications.

**Non-obstetric providers should:**

- Receive training to consistently assess pregnancy intentions and goals—especially for patients with complex medical comorbidities—and provide tailored counseling and referrals.
- Build competence and confidence in ordering appropriate imaging during pregnancy by applying evidence-based guidelines.
- Use pharmacological databases and validated resources to guide safe prescribing during pregnancy and postpartum, with particular attention to mental health medications.
- Incorporate education and training on screening for IPV, adolescent abuse, and responding to disclosures safely and effectively.

## Training & Education

**Emergency Medical Services (EMS) should:**

- Provide regular staff training on the unique aspects of pregnancy-related emergencies and early warning signs.
- Train dispatch and EMS personnel on integrating pregnancy status screening into 911 calls and field assessments

**School systems should:**

- Integrate reproductive health, early pregnancy warning signs, and contraception into health education curricula.
- Provide education on healthy relationships and IPV prevention.
- Create opportunities for students to access mental and reproductive health screenings, workshops, and support.

**City, state, and federal agencies should:**

- Increase community education on gun violence prevention and IPV as part of broader maternal health safety initiatives.

**Community-based organizations should:**

- Offer educational workshops and seminars on pregnancy-related r isks and complications and/or refer clients to ReACH's Community Education programs.
- Provide IPV, healthy relationships, and reproductive health education integrated with broader community engagement strategies.

## Care Delivery

**Health care systems should:**

- Incorporate EMR checklists and pregnancy-specific decision aids and monitor their use to improve consistency and outcomes.
- Expand access to primary care programs that include chronic disease management during the interpregnancy interval.
- Provide comprehensive discharge planning after abortion or miscarriage, including educating support persons on warning signs and confirming support availability at home.

**Emergency departments should:**

- Develop protocols identifying when to seek urgent obstetric consultation.
- Implement follow-up and outreach processes for patients after ED visits to ensure continuity and address emerging concerns.

**School systems should:**

- Partner with local health care providers for on-site reproductive and mental health screenings, workshops, and linkage to care.
- Establish safe spaces and support groups for adolescents to discuss reproductive health concerns.

**Community-based organizations should:**

- Establish support groups for pregnant individuals and new parents, providing a platform for sharing experiences and information.
- Maintain up-to-date resource guides listing prenatal providers, emergency contacts, and local supports.

## Policy & Investment

**City, state, and federal agencies should:**

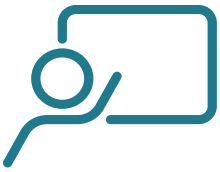
- Invest in mobile health units and telehealth services to extend access to maternal health education, screening, and care — especially in underserved areas.
- Launch targeted outreach efforts in high-risk communities to improve early detection of pregnancy-related complications and reduce disparities.
- Fund research and pilot programs to identify innovative strategies for early detection and intervention in pregnancy-related complications.
- Conduct reviews of domestic violence fatality cases to inform prevention strategies and strengthen maternal safety.
- Support gun violence prevention initiatives that highlight the permanence of firearm injury and integrate IPV prevention into violence mitigation strategies.

## GOAL 5:
# Implement Strategies to Establish Medical Trust with the Community

**Structural and historical harms have eroded community trust in health care.**

This section outlines strategies to rebuild trust through culturally humble care, workforce diversity, respectful communication, accountability structures, patient advocacy supports, and reimbursement models that elevate community-centered approaches.

> "I don't think she was taken seriously at the first hospital visit after the birth. I don't think there was enough done at that appointment."
>
> —Key Informant Interview, Decedent's Husband



### Training & Education

**Health care systems should:**

- Implement periodic comprehensive, nonjudgmental training for all staff on cultural humility, racism, implicit bias, and gender bias, supported by accountability mechanisms.
- Expand education for clinical providers on strategies for discussing treatment recommendations, understanding patient hesitancy, and engaging in respectful shared decision-making.

### Care Delivery

**Health care systems should:**

- Prioritize hiring diverse care teams that reflect the communities they serve.
- Establish systems that support continuity of care, ensuring that patients see consistent providers throughout pregnancy and postpartum.
- Build transparent communication channels—including feedback loops, complaint pathways, and patient experience monitoring—to ensure concerns are heard and addressed promptly.
- Create and promote patient advocacy support services (e.g., doula support, peer navigators) to empower individuals to understand their rights and participate fully in care decisions.

## Care Delivery

**Health care providers—including obstetric and non-obstetric providers—should:**

- Approach care hesitancy by addressing both physical and psychological needs, ensuring a whole-person model of care.
- Engage trusted family members, social supports, or alternate care providers to build a supportive decision-making network.
- Prioritize approaches that respect the patient's values, preferences, and lived experience, particularly when navigating treatment decisions.

## Policy & Investment

**Health insurance companies should:**

- Reimburse for doula care and community health worker services across the perinatal period to support emotional, informational, and physical needs.
- Partner with health systems to support sustainable patient advocacy programs that enhance shared decision-making and promote equitable care experiences.

**City and state agencies should:**

- Develop and disseminate culturally responsive educational materials in partnership with communities to enhance understanding, reduce stigma, and and build trust.

## Summary and Implications for Philadelphia

The recommendations presented in this report reflect the collective opportunities within Philadelphia's health systems, community organizations, behavioral health providers, insurers, and governmental partners to strengthen the care and support available to pregnant and postpartum individuals. By enhancing training and education, improving coordination and delivery of care, and advancing supportive policies and investments, these recommendations offer actionable strategies that can be implemented across the city's maternal health ecosystem. Together, they represent meaningful and achievable steps that Philadelphia can take now to improve outcomes and build a more coherent and compassionate system of care for families.

Yet even the most effective local action cannot fully counterbalance the broader structural and generational conditions that shape maternal and family health long before individuals interact with Philadelphia's health and social service systems. Persistent differences continue to influence who thrives and who faces preventable harm. To create lasting improvements for Philadelphia families, these upstream determinants must also be addressed. The following section, therefore, turns to long-term structural priorities and policy considerations that extend beyond local systems, highlighting the broader societal changes needed to support maternal and family health across generations.

## Transforming Generational Conditions: Long-Term Structural and Policy Priorities for Maternal and Family Health

**Maternal health disparities in the U.S. differ substantially from those in other high-income countries and contribute to preventable maternal morbidity and mortality.[9,10] To meaningfully and sustainably improve maternal and family health outcomes, long-term strategies must look beyond clinical interventions to address the broader social, economic, and structural factors that influence health across the life course.**

**A forward-looking approach includes adopting or adapting evidence-informed models that have demonstrated impact either in the US or internationally, with attention to rigorous evaluation and equitable implementation.**

## Long-Term Structural Priorities and Global Insights

**Strengthen access to comprehensive health coverage across the life course**

Countries with universal or near-universal health coverage demonstrate improved maternal outcomes, reduced financial barriers, and better continuity of care.[11,12] Expanding continuous, affordable coverage in the US can help reduce maternal morbidity and mortality, particularly during postpartum insurance churn.

**Expand paid family and medical leave**

Paid leave is associated with improved postpartum mental health, increased breastfeeding rates, reduced rehospitalization, and improved child health.[13,14] Evidence from both US state programs and international systems demonstrates that comprehensive leave policies support maternal well-being and economic stability.

**Invest in economic security and family stability**

Socioeconomic inequality strongly predicts maternal and infant health outcomes.[10,15] Policies that strengthen income supports, foster economic mobility, and reduce wealth gaps can mitigate generational patterns of disadvantage linked to maternal morbidity and mortality.

**Advance environmental justice and healthy community conditions**

Environmental exposures—including air pollution, extreme heat, and housing instability—contribute to adverse birth outcomes.[16,17] Policies promoting clean air, safe housing, and access to green space support the conditions necessary for healthy pregnancies and families.

**Strengthen family-support policies within the criminal justice system**

Mass incarceration and punitive approaches to substance use disproportionately harm families, disrupt caregiving relationships, and worsen maternal and infant outcomes.[18,19] Policies that prioritize treatment, diversion, and family unity can promote more stable environments for parents and children.

**Improve access to childcare, early childhood supports, and nutrition programs**

High-quality childcare and early childhood supports improve developmental outcomes and support maternal workforce participation.[20,21] Nutrition programs and family supports also reduce food insecurity and enhance child and maternal well-being.

**Integrate mental health across primary and reproductive health systems**

Integrated mental health models lead to improved detection, treatment, and follow-up for perinatal mental health conditions.[22,23] Establishing trauma-informed, culturally responsive perinatal mental health systems is a critical long-term priority.

**Commit to evaluation and data-driven policy development**

Rigorous evaluation frameworks—such as the RE-AIM model—help institutions measure the impact of interventions and improve implementation fidelity.[24] System-wide commitment to data-driven decision-making ensures that investments improve maternal and family health equity.

## Conclusion

**Addressing generational challenges requires more than clinical improvements—it demands transformative, long-term structural reform across health, social, economic, and policy environments. By drawing on evidence from both US and global contexts, the nation can take meaningful steps toward a future in which every mother, birthing person, child, and family can thrive.**

# BIRTH JUSTICE PHILLY AND THE ORGANIZED VOICES FOR ACTION (OVA)

To address maternal mortality challenges and implement the MMRC's recommendations, ReACH established **Birth Justice Philly**. Comprised of professionals from diverse disciplines, including health care, epidemiology, education, and public health, this team works to gather crucial data and translate it into actionable strategies to improve perinatal health outcomes in Philadelphia.

Birth Justice Philly operates through two core branches:

(1) conducting citywide data collection and comprehensive surveillance to track local trends in maternal mortality and severe maternal morbidity, including the MMRC, and

(2) leveraging this data to pinpoint and pursue tangible next steps through our action team, the **Organized Voices for Action (OVA)**. In collaboration with a large, diverse group of stakeholders, the OVA works across sectors to develop innovative strategies, allocate expertise and funding to pilot projects, and integrate community perspectives and solutions into policies and programs to improve maternal health outcomes in Philadelphia.

The OVA is structured into three pillars: Implementation Teams, Coalition Building, and Community Education. These pillars are described in further detail below:

## Implementation Teams

Implementation Teams are multidisciplinary groups of experts, including those with lived experience, who work to carry out recommendations from the Philadelphia MMRC. Team members include women and birthing people, representatives from governmental agencies, health care professionals, insurance providers, maternal support organizations, policy advocates, social determinants of health professionals, and other support networks. These teams play a pivotal role in identifying and pursuing individual and collaborative initiatives to address MMRC recommendations. The inclusion of community members is critical to these efforts, ensuring that solutions are not only practical but also rooted in lived experiences. This cross-sector collaboration is essential to address the complex, multifaceted challenges of maternal health effectively.

## Implementation Teams — The OVA

**The Philadelphia MMRC's 2020 report identified tackling the root causes of health inequities within the health care system as a priority and advocated for investment in Black-led Community-Based Organizations (CBOs) as a key strategy.**

Recognizing the pivotal role of CBOs in advancing maternal health equity, the OVA established the Community Investment (CI) implementation team to address this recommendation. The CI team is comprised of women of color involved in maternal health spaces and with personal pregnancy and birth experiences.

Following a comprehensive needs assessment conducted in 2022, which underscored the importance of capacity-building to ensure CBO sustainability, the team launched a technical assistance mini-grant program. The first cohort concluded in Spring 2024, and the second mini-grant cycle was announced in April 2025. The Community Investment team awarded **22** technical assistance grants to community-based organizations working to improve maternal health in Philadelphia.

**Aligned MMRC Goals:**

» **Goal 3: Optimize Coordination Across Health and Social Systems**

- By strengthening the capacity of community-based organizations, the team supports improved coordination between health care systems and community services.

» **Goal 5: Establish Medical Trust with the Community**

- This team responds to MMRC recommendations by investing in Black-led and community-based organizations, recognizing their role in fostering trust and delivering culturally responsive maternal health support.

» **Policy & Investment Recommendations**

- The technical assistance mini-grant program operationalizes MMRC calls for sustained investment in community infrastructure to address upstream drivers of maternal health inequities.

## Intimate Partner Violence implementation team:

**The Philadelphia MMRC's 2020 report found that, in 21% of all pregnancy-associated death cases, the decedent had experienced IPV at some time in their life.**

Acknowledging this critical issue, ReACH and the Office of Domestic Violence Strategies (ODVS) were successfully awarded a 5-year grant from the U.S. Department of Health and Human Services Office of Women's Health to tackle maternal mortality stemming from violence. The initiative, "Transforming Philadelphia's Response to IPV and Sexual Violence in Obstetric Settings," aims to enhance data collection on IPV and sexual violence within the maternal mortality review process, bolster the capacity of delivery hospitals and emergency rooms to identify and address IPV and sexual violence, and establish a referral system to seamlessly connect individuals to local domestic violence (DV) agencies.

Key accomplishments from the IPV implementation team include integrating updated, validated IPV screening tools and protocols across all Philadelphia delivery hospitals and developing a trauma-informed IPV training for health care providers in obstetric triage settings, launched in 2024. To further educate both the medical community and the public, the team launched the IPV During Pregnancy campaign, a wide-reaching public health campaign designed to raise awareness and increase connections to IPV resources. Recognizing the need for immediate support, the team launched warm handoff protocols across hospitals, including the PhillySAFE (Support for Aid for Families Expecting) concrete goods fund to support emergency hoteling and transportation for survivors identified in OB triage. This work, in partnership with ODVS, also helped to secure additional funding to enhance the capacity and responsiveness of Philadelphia's domestic violence hotline.

**Aligned MMRC Goals:**

» **Goal 3: Optimize Coordination and Continuity of Care**

- The initiative enhances referral pathways and warm handoffs between health care settings and domestic violence agencies, directly addressing care transition gaps identified by the MMRC.

» **Goal 4: Improve Understanding of Pregnancy-Related Risks**

- This work aligns with MMRC recommendations to improve recognition of IPV as a significant risk factor for pregnancy-associated mortality and to strengthen early identification across care settings.

## Perinatal Substance Use Disorder (SUD) implementation team:

**The Perinatal SUD implementation team was created to address MMRC recommendations aimed at tailoring behavioral and mental health services to meet the specific needs of pregnant and postpartum people with substance use disorders.**

Goals of the implementation team include creating streamlined care coordination and developing standardized protocols to facilitate referral for pain management and medications for opioid use disorder (MOUDs). The team consists of community-based organization leaders, doulas, health care providers, and government leaders working to create processes that improve pregnant and postpartum people's access to SUD care while simultaneously identifying and bridging gaps in these systems. In 2025, the Birth Justice Philly team, in partnership with the PDPH Division of Substance Use Prevention and Harm Reduction (SUPHR), implemented a Perinatal SUD Warmline Expansion project to expand existing programs to address the needs of this population. The Warmline Expansion serves both patients and providers across southeast Pennsylvania by connecting them to expert consultation, support, and resources for SUD management and concerns specific to the pregnant and postpartum population.

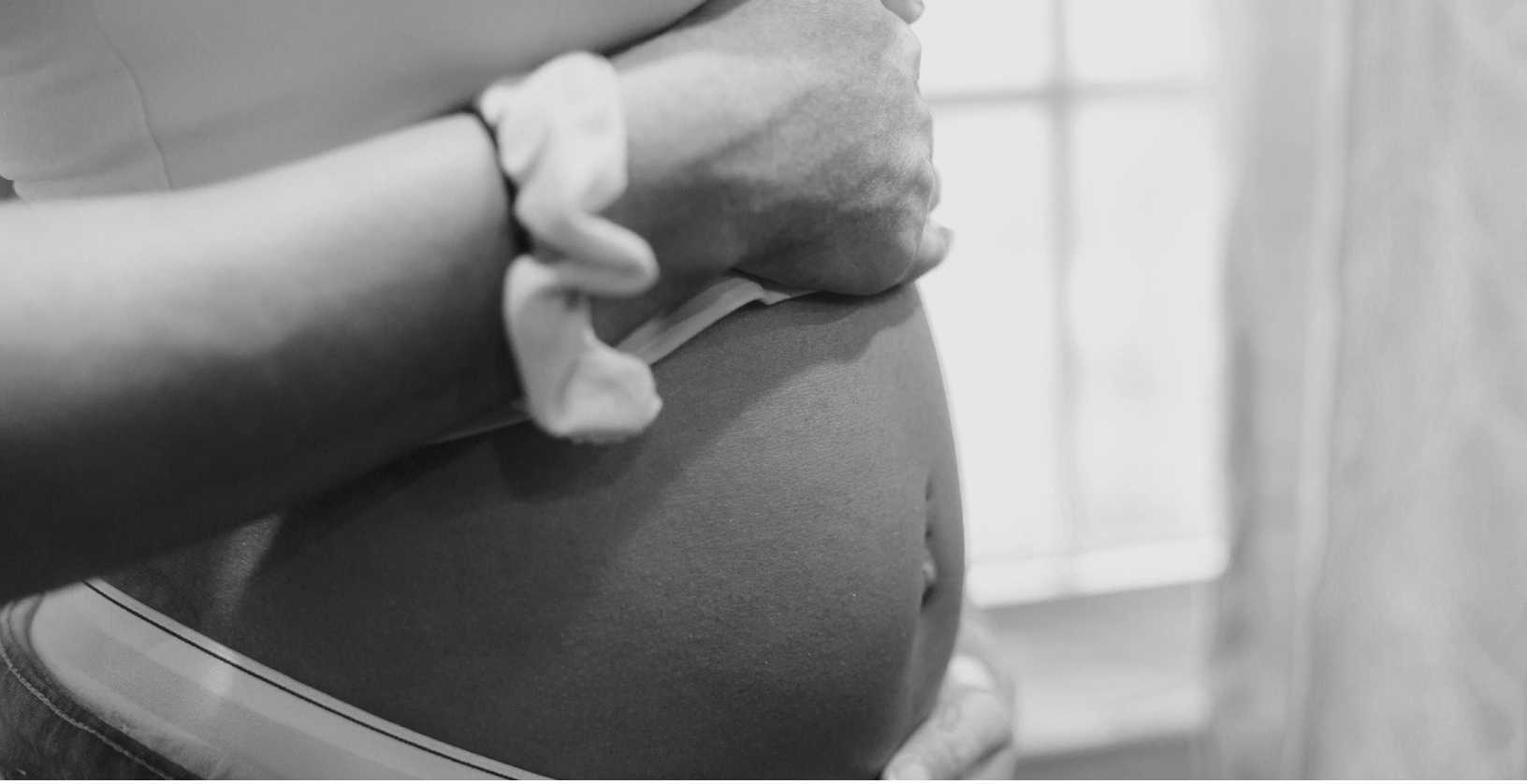
**Aligned MMRC Goals:**

» **Goal 1: Develop Behavioral Health Systems for Pregnant and Postpartum People with SUD**

- This team directly advances MMRC recommendations to strengthen perinatal SUD systems by improving access to MOUD, consultation, and coordinated care tailored to pregnancy and postpartum needs.

» **Goal 2: Improve Infrastructure for Mental Health Care**

- This initiative integrates behavioral health expertise into maternal health systems, addressing MMRC-identified gaps in perinatal mental health and substance use treatment.



## Coalition Building

**The OVA facilitates multiple collaboratives and coalitions to bring stakeholders together to bridge the gaps among community-based organizations, clinicians, health care personnel, hospital systems, social service professionals, government agencies, policymakers, and more. These coalitions provide space for sharing best practices and maintaining connectivity across sectors.**

**Current Coalitions:**

- Perinatal Substance Use Disorder Learning Collaborative
- Philadelphia Labor & Delivery Leadership Group
- Obstetrics/Managed Care Organization Leadership Group
- Obstetrics/Cardiology Task Force
- BirthBridge Philly - Prenatal Care Consortium

**Aligned MMRC Goals:**

- **Goal 3: Optimize Coordination and Continuity of Care**
  - Coalitions respond to MMRC findings that many maternal deaths occur during transitions of care by strengthening communication and collaboration across systems.
- **Goal 4: Improve Recognition of Pregnancy-Related Risks Across Settings**
  - By engaging non-obstetric providers, hospital leadership, and managed care partners, these coalitions support consistent recognition and response to maternal health risks across care environments.

## *It Takes a Village* Community Education Programs

The OVA provides essential education sessions to raise awareness about factors contributing to maternal mortality, recognizing that the burden should not rest solely on birthing people to advocate for their needs. These trainings are designed to empower members of our local community with the knowledge and skills necessary to enhance maternal health outcomes by promoting health-seeking behaviors for birthing individuals in their circles. The OVA has successfully maintained a community-centered training program focused on recognizing the early warning signs of post-birth complications since 2022. In 2025, the OVA launched a new Perinatal Mood and Anxiety Disorder Training.

## When Joy Feels Heavy: Perinatal Mood & Anxiety Disorders (PMAD) Education Session

This educational session was created in response to pregnancy-related mortality data from the Philadelphia MMRC and national mental health trends. The training aims to educate and empower community members in both clinical and non-clinical settings to recognize the warning signs of perinatal mental health concerns and encourage care-seeking behavior. PMADs are anxiety or depressive symptoms that start or worsen during pregnancy and/or during the postpartum period. In Philadelphia, mental health conditions (other than substance use disorder) were determined to be a contributing factor in 42% of pregnancy-related death cases from 2019 to 2023. According to the Maternal Mental Health Leadership Alliance, 1 in 5 U.S. birthing people are impacted by a perinatal mental health condition. Furthermore, mental health information is often missing or underreported in medical and administrative data, so these numbers are likely an underestimation of the true extent of the burden of PMADs. This 90-minute education session is available virtually or in person and is always co-facilitated by a clinical expert and a lived experience expert.

## Early Warning Signs of Post-Birth Complications Education Session

In response to high and rising rates of severe maternal morbidity in Philadelphia, the OVA developed and implemented an *Early Warning Signs of Post-Birth Complications* training program to educate all individuals who may interact with birthing people in the postpartum period on the specific signs of post-birth complications. The training aims to empower individuals in both clinical and non-clinical settings to recognize the warning signs of potential postpartum health complications and to promote care-seeking behavior among postpartum birthing people (e.g., seeking emergency medical care). This one-hour education session is available virtually or in person and is always co-facilitated by a clinical expert and a lived experience expert.

### Aligned MMRC Goals:

» **Goal 2: Improve Infrastructure for Mental Health Care**

- Trainings focused on perinatal mental health address MMRC findings related to the under-recognition of mental health conditions contributing to maternal mortality.

» **Goal 4: Improve Understanding of Pregnancy-Related Risks**

- These community education initiatives address MMRC recommendations to expand awareness of early warning signs and maternal health risks beyond clinical settings and in the postpartum period.

» **Training & Education Recommendations**

- These programs operationalize MMRC calls for broad-based education that equips community members, families, and providers to support timely care-seeking.

# RESOURCES

» **Birth Justice Philly and the OVA**
https://www.birthjusticephilly.com/

- **Sign up for the Birth Justice Philly newsletter**
  https://cdn.forms-content.sg-form.com/4717e2f9-f16f-11ec-bc61-12453e214c75
- **Request a Community Education Training**
  https://www.birthjusticephilly.com/community-education
- **Learn more about the Perinatal SUD Warmline Expansion**
  https://www.birthjusticephilly.com/perinatal-behavioral-health-access-line
  Or access the Perinatal SUD Warmline at **(484) 278-1679**

» **Alliance for Innovation on Maternal Health (AIM) Patient Safety Bundle**
https://saferbirth.org/patient-safety-bundles/

» **Centers for Disease Control and Prevention (CDC): About Maternal Mortality Review Committees**
https://www.cdc.gov/maternal-mortality/php/mmrc/index.html

» **PDPH Division of Reproductive, Adolescent, and Child Health (ReACH)**
https://www.phillylovesfamilies.com/

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