Ohio Pregnancy-Associated Mortality Review Program PAMR

Background:

Every year, approximately 2,000 Ohio women experience a severe maternal morbidity, or an unexpected outcome of labor and delivery that results in significant short- or long-term consequences to a woman's health, and 21 women die of complications related to their pregnancy. The Pregnancy-Associated Mortality Review (PAMR) Program was established in 2010 at the Ohio Department of Health (ODH) as an enhanced surveillance program to monitor maternal mortality in Ohio.

The PAMR Program is comprised of two groups, each with distinct roles:

The Multidisciplinary Review Committee

The Multidisciplinary Review Committee is made up of individuals from a diverse set of disciplines and backgrounds with specific expertise to review each maternal death. For a list of recommended disciplines, please refer to the ReviewtoAction.org website. The Multidisciplinary Committee meets on average three to four times per year, with more meetings added on an as needed basis. Ohio PAMR reviews all pregnancy-associated deaths.

For each death, the following data points are determined by the review committee and entered into the Maternal Mortality Review Information Application (MMRIA), a data management system hosted by the Centers for Disease Control and Prevention (CDC).

- Was the death pregnancy-related?
- What was the cause of death?
- Was the death preventable?
- What factors contributed to the death?
- What are the recommendations and actions that address the contributing factors?
- What is the anticipated impact of these actions, if implemented?

The ODH PAMR Staff

The ODH PAMR Staff includes data analysts, nurse abstractors, and program consultants. Data analysts are responsible for analyzing and reporting data findings. Nurse abstractors are responsible for day-to-day surveillance activities and facilitating the Multidisciplinary PAMR Committee. PAMR processes have been codified into Ohio Revised Code (ORC) 3738. The graphic below explains the PAMR process further.

Additionally, program staff are busy implementing data-informed activities and programs to reduce maternal morbidity and mortality in Ohio. These data-informed activities and programs have been made possible through federal grant opportunities. The PAMR program staff is also responsible for facilitating the **Ohio Council to Advance Maternal Health** (OH-CAMH), the statewide maternal health task force in Ohio. See page 4 of this fact sheet for additional information about OH-CAMH and other program activities.

PAMR Process

1. ODH Bureau of Vital Statistics **identifies** all pregnancy-associated deaths. ODH PAMR staff seeks various sources of data, such as hospital, prenatal, and social service records, to collect information about each death.
2. ODH PAMR staff prepares and **selects** cases to review at each meeting based on available sources of records.
3. ODH PAMR staff **abstracts** (gathers) available data sources and creates de-identified case summaries for PAMR Multidisciplinary Committee to review.
4. PAMR Multidisciplinary Committee **reviews** each death and case summary and determines pregnancy-relatedness, preventability, contributing factors, and recommendations. ODH PAMR staff enter case data into a database where it can be extracted and analyzed.
5. **Review to Action.** The PAMR committee's findings and recommendations are analyzed to inform Ohio's programmatic plans to reduce maternal morbidity and mortality across the state.

Ohio Department of Health

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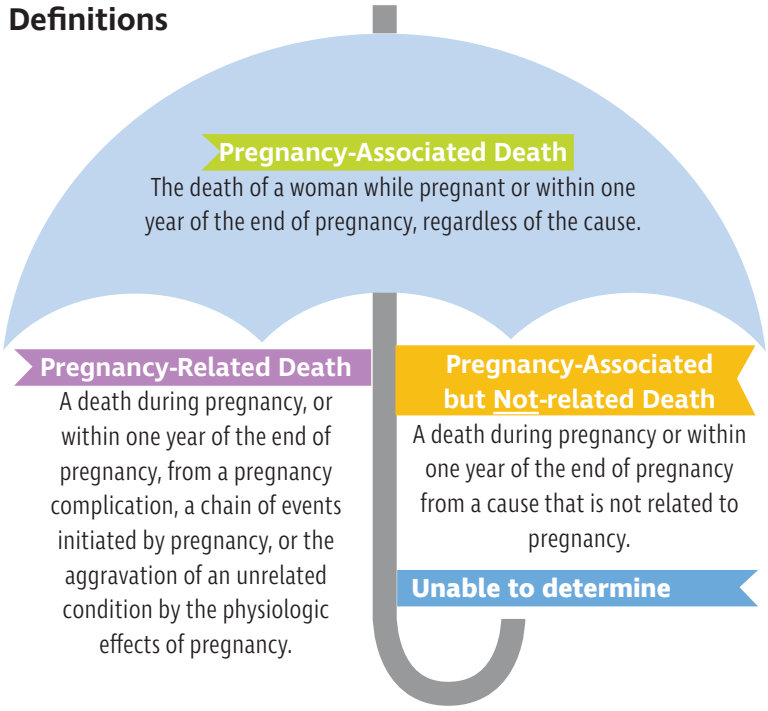
Definitions



These definitions help PAMR answer the question,

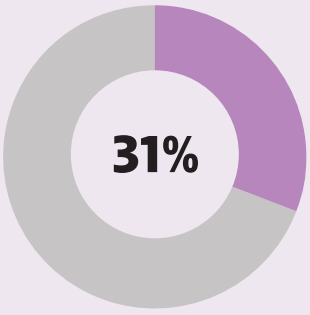
"If the woman had not been pregnant, would she have still died?"

If the answer is no, then that death is considered pregnancy-related.

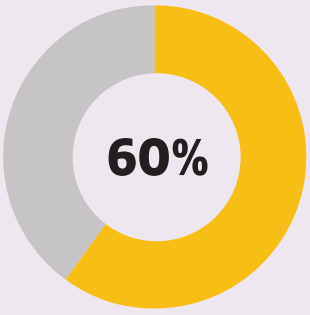
PAMR Data Findings

Pregnancy-Related Deaths in Ohio, 2008-2017

Of the 731 pregnancy-associated deaths in Ohio from 2008 to 2017 ...



were determined to be pregnancy-related



were determined to be pregnancy-associated but not related

59% **of pregnancy-related deaths were deemed preventable**

Ohio Department of Health

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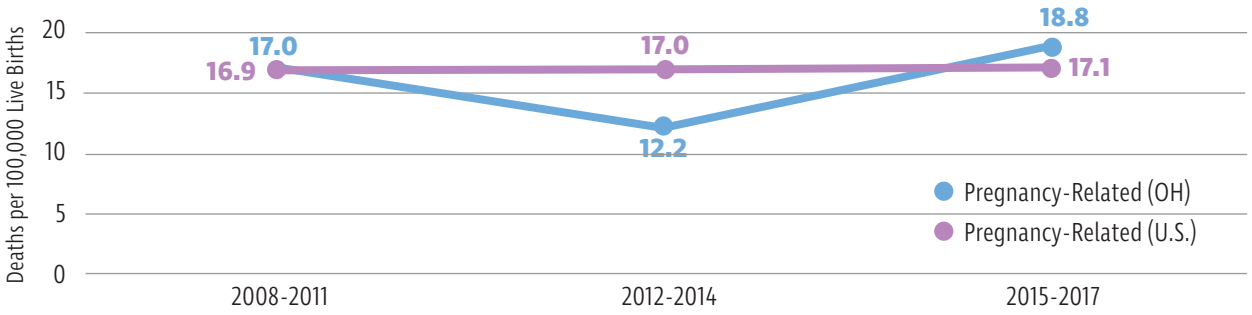
Figure 1. Ohio and U.S. Maternal Mortality Ratios, 2008-2017



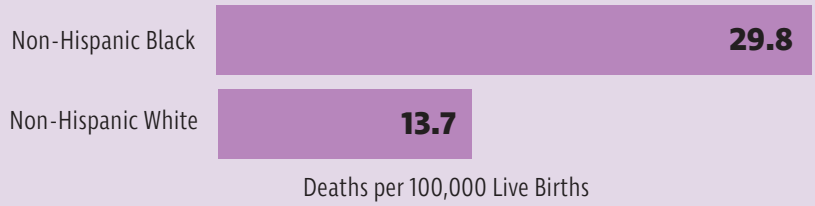
Data Sources: ODH Bureau of Vital Statistics, MMRIA, and U.S. data.

Note: Caution should be used in comparing U.S. and Ohio ratios as surveillance methods differ.

The pregnancy-related mortality ratio (PRMR) increased from 2012-2014 to 2015-2017 (Figure 1). Contributing to this increase was the implementation of new criteria[1] to determine the pregnancy-relatedness of unintentional overdose and suicide deaths, which focuses more on the possible aggravation of mental health conditions during pregnancy and in the postpartum year. Only a sample of 2015-2016 deaths were fully reviewed. If all 2015-2016 deaths were fully reviewed it is possible that the corresponding PRMRs for those years could be higher; however, it is unlikely because the new criteria to determine pregnancy-relatedness were not implemented until 2017.

[1]Adapted from the Utah Department of Health Perinatal Mortality Review.

Figure 2. Pregnancy-Related Mortality Ratios by Race/Ethnicity, 2008-2017 Ohio



In Ohio, Black women are **2.2 times more likely** to die from a cause related to pregnancy than white women. These disparities begin during pregnancy and continue through the first year after delivery.

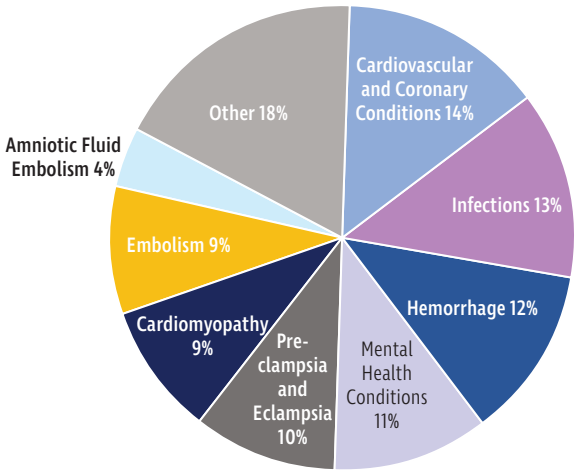
Leading Causes of Pregnancy-Related Deaths

The leading causes of pregnancy-related deaths in Ohio from 2008 to 2017 were:

- Cardiovascular and coronary conditions, 14%
- Infections, 13%
- Hemorrhage, 12%
- Mental health conditions, 11%
- Pre-eclampsia and eclampsia, 10%
- Cardiomyopathy, 9%
- Embolism, 9%
- Amniotic fluid embolism, 4%
- Other, 18%

Other causes of death include cerebrovascular accidents, homicide, unintentional injury, malignancies, and blood disorders (Figure 3).

Figure 3. Leading Causes of Pregnancy-Related Deaths in Ohio, 2008-2017



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Putting the PAMR Data Into Action

ODH's Bureau of Maternal, Child, and Family Health (BMCFH) was competitively awarded funding from both the Health Resource Service Administration (HRSA) and the Centers for Disease Control and Prevention (CDC) to improve maternal health and reduce maternal morbidity and mortality. These grants bring a combined $12.25 million to Ohio over the next four years to implement innovative strategies to address maternal health. These funding opportunities are supporting the implementation of the following initiatives:

Ohio Department of Health
Ohio Council to Advance Maternal Health

Ohio Council to Advance Maternal Health (OH-CAMH) is a newly formed statewide maternal health task force. This group will use data from PAMR, Title V (federal maternal and child health grant program), State Health Improvement Plan, and other resources from OH-CAMH membership to develop and implement a statewide, maternal health strategic plan. This is a group of more than 80 community, local, and state organizations, as well as impacted individuals, focused on addressing maternal health in Ohio.

AIM
ALLIANCE FOR INNOVATION ON MATERNAL HEALTH

In October 2020, ODH partnered with the Ohio Hospital Association to join the national maternal health initiative, the Alliance for Innovation on Maternal Health (AIM). This program works through state teams, hospitals, and health systems to align national, state, and hospital level quality improvement (QI) efforts to improve overall maternal health outcomes.

AIM Severe Hypertension in Pregnancy Bundle — ODH is working with the Government Resource Center (GRC) to implement this bundle in all delivery hospitals across Ohio through 2024 to reduce preventable hypertension-related maternal morbidity/mortality. There are 34 delivery hospitals participating in the first wave of implementation. Hospitals included in the first wave represent various geographies, levels of maternal care, and diversity of births.

Urgent Maternal Warning Signs Education

This QI activity focuses on teaching moms about severe symptoms that can occur during pregnancy or in the postpartum period that should never be ignored. Although the nature of this education is clinical, this messaging is being provided in non-clinical settings, such as in WIC clinics, through Home Visiting providers, and at Healthy Start sites to reach a wider audience of moms. Educating moms on recognizing prenatal and postpartum warning signs has the potential to prevent severe complications and save lives.

Healthy MOM Healthy FAMILY
An IMPLICIT Interconception Care Quality Improvement Project

ODH is working with GRC and the Ohio chapter of the American Academy of Pediatrics (AAP) to implement this project based on a program developed by the Family Medicine Education Consortium IMPLICIT Network (Interventions to Minimize Preterm and Low birth weight Infants using Continuous quality Improvement Techniques). IMPLICIT Network is a framework that focuses on maternal health screenings at well-child visits. This is the first pediatric focused QI program to implement a nationally tested interconception care model in well-child visits for birth – 18 months.

Managing Implicit Bias and Maternal Health

Differences in the incidence and prevalence of health conditions and health status between groups are commonly referred to as health disparities. Unconscious beliefs, or implicit bias, can impact the work we conduct and contribute to these health disparities. The ODH PAMR program is hosting 26 implicit bias trainings between May 2020 and June 2022 with continuing education credit for women's health providers. These trainings will be offered to all the providers affiliated with the delivery hospitals participating in the AIM Hypertension Bundle. Trainings will also be open for registration for other women's health providers throughout Ohio.

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Telehealth Delivery Training for Women's Health Providers	The purpose of this training is to train women's health providers to provide sensitive and culturally competent care in a telehealth encounter, with the long-term goal of improving patient access to care.
Emergency Obstetric Simulation for Emergency Medicine Providers	In partnership with The Ohio State University Clinical Skills Education and Assessment Center, ODH developed a series of trainings for emergency medicine providers to increase their knowledge and preparedness related to obstetric emergencies. Twenty-nine trainings will be completed between March 2019-September 2024.
Disparities in Maternal Health Community Grant Program	The goal of this grant program is to fund solutions identified by communities and address unmet needs through a disparities-focused, equity-driven len. Our current 4 subgrantees are working on a variety of local projects related to topics such as care coordination and applying lived experience to address equity in maternal health.

For more information about these initiatives and more, visit our website at https://odh.ohio.gov/wps/portal/gov/odh/know-our-programs/pregnancy-associated-mortality-review/welcome.