Pregnancy-Associated Mortality Review (PAMR) Update

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OCPIM
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Outline

- Maternal Mortality Overview
- ODH PAMR Overview
- ODH PAMR New Activities

Maternal Mortality Overview

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Definitions

Maternal Mortality Review Committee (MMRC)

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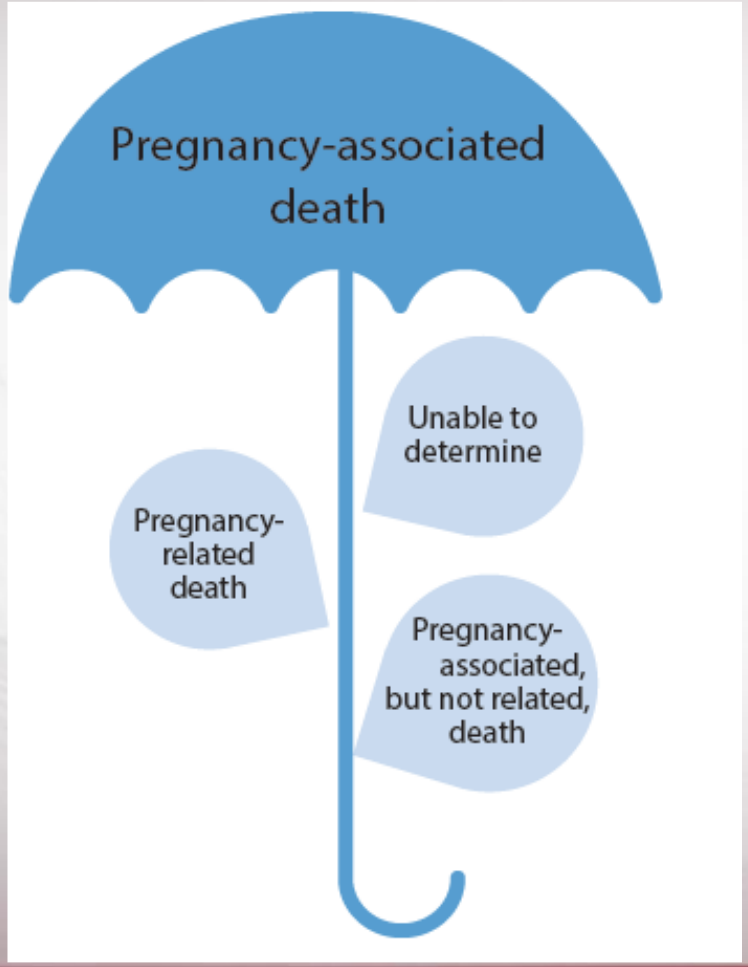
ODH Pregnancy-Associated Mortality Review (PAMR)

Definitions

Pregnancy-Related Death

The death of a woman during pregnancy or within one year of pregnancy from a pregnancy complication, a chain of events initiated by pregnancy, or the aggravation of an unrelated condition by the physiologic effects of pregnancy



Pregnancy-Associated but NOT Related Death

The death of a woman during pregnancy or within one year of pregnancy from a cause that is not related to pregnancy

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Unique Role of Maternal Mortality Review Committees (MMRCs)

	CDC – National Center for Health Statistics (NCHS)	CDC – Pregnancy Mortality Surveillance System (PMSS)	Maternal Mortality Review Committees
Data Source	Death certificates	Death certificates linked to fetal death and birth certificates	Death certificates linked to fetal death and birth certificates, **medical records, social service records, autopsy, informant interviews…**
Time Frame	During pregnancy – 42 days	During pregnancy – 365 days	During pregnancy – 365 days
Source of Classification	ICD-10 codes	Medical epidemiologists (PMSS-MM)	**Multidisciplinary committees**
Terms	Maternal death	Pregnancy associated, (Associated and) Pregnancy related, (Associated but) Not pregnancy related	Pregnancy associated, (Associated and) Pregnancy related, (Associated but) Not pregnancy related
Measure	Maternal Mortality Rate - # of Maternal Deaths per 100,000 live births	Pregnancy Related Mortality Ratio - # of Pregnancy Related Deaths per 100,000 live births	Pregnancy Related Mortality Ratio - # of Pregnancy Related Deaths per 100,000 live births
Purpose	Show national trends and provide a basis for international comparison	Analyze clinical factors associated with deaths, publish information that may lead to prevention strategies	**Understand medical and non-medical contributors to deaths, prioritize interventions that effectively reduce maternal deaths**

Nicely reviewed in:

- Callaghan, William M. 2012. Overview of maternal mortality in the United States. Seminars in perinatology. 36; 1: 2-6.
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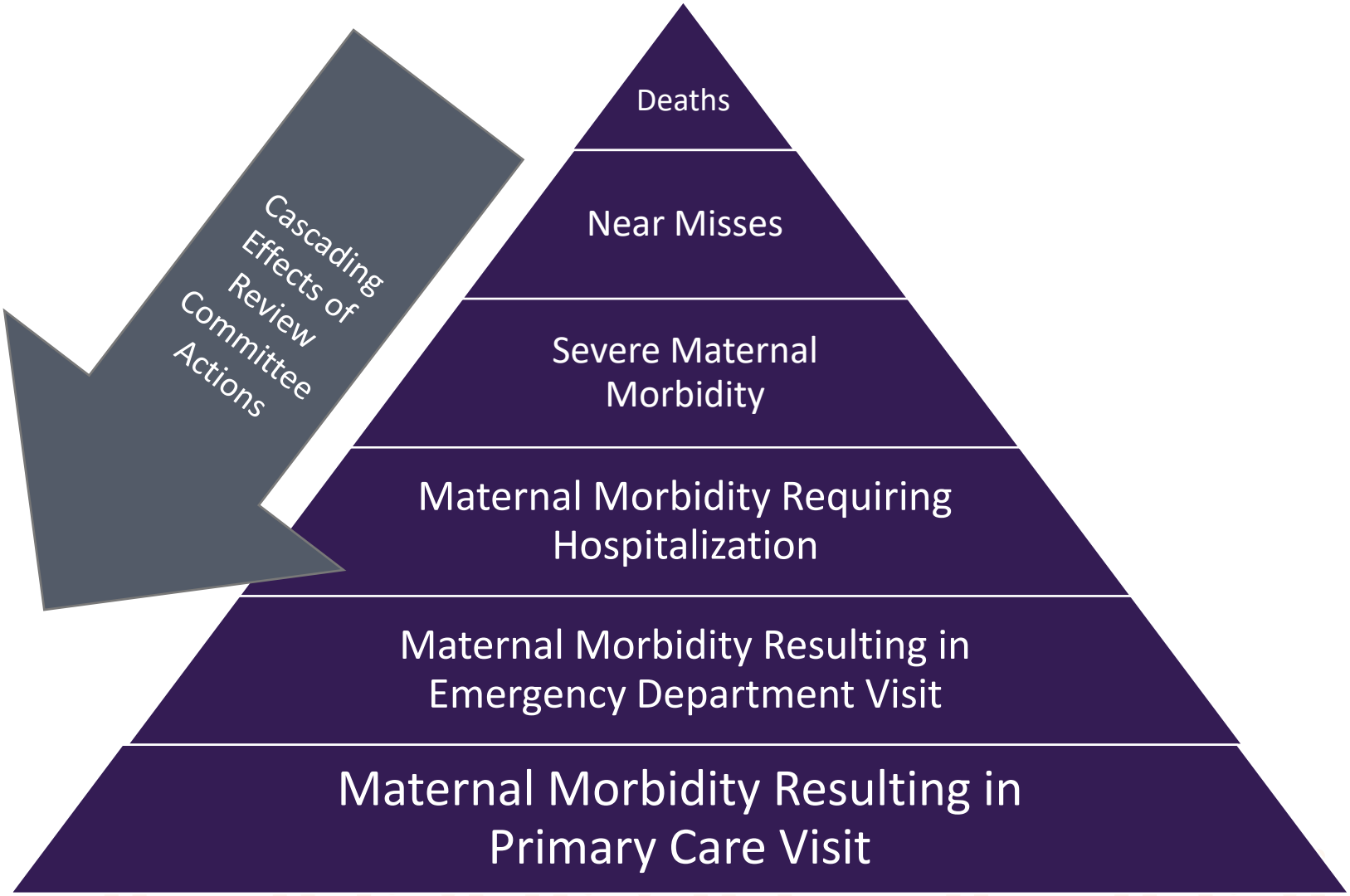
MMRC: Six Key Decisions

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

Power of MMRCs



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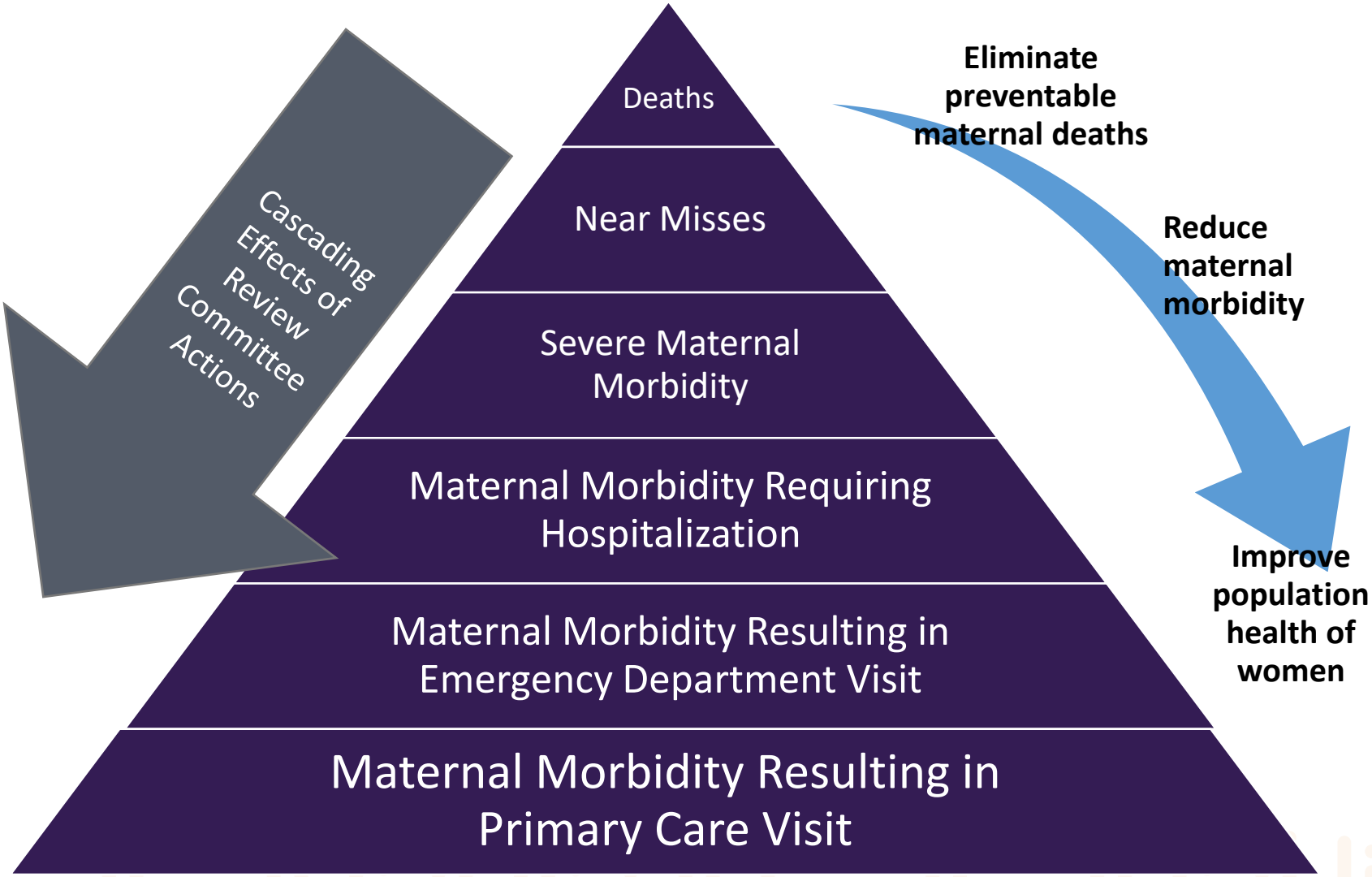

ODH PAMR

Objective

- Decrease pregnancy-associated and pregnancy-related mortality and maternal morbidity

Purposes

- To identify preventability
- To examine circumstances of a woman's death around pregnancy
- To identify factors that contribute to the death
- To provide recommendations and create interventions to improve maternal outcomes

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MATERNAL MORTALITY REVIEW SYSTEM
OHIO PAMR - FLOW CHART

MATERNAL DEATH (EVENT)

DEATH CERTIFICATE TO NCHS FOR ICD-10 CODING

SUBMISSION OF DEATH CERTIFICATE TO OHIO VITAL STATISTICS (ODH-VS)

MATERNAL DEATHS TO PAMR COORDINATOR

INTERNAL REVIEW OF DEATHS: DOES EVENT MEET PAMR CRITERIA?

NO

CASE IS EXCLUDED

YES

RECORDS REQUESTS

HOSPITALS | CORONERS | MEDICAID | PHYSICIANS | INTERNET | LAW ENFORCEMENT

ABSTRACTION PROCESS (CASE SUMMARY)

PAMR BOARD MEETING (CASE REVIEW)

COMPLETION OF ASSOCIATED FACTORS FORM:

TEAM AGREE: CAUSE/MANNER OF DEATH?

PREGNANCY RELATED?

UNDERLYING FACTORS?

COLLECTION AND STORAGE

ANALYSIS

DISSEMINATION

ODH PAMR Review Process

1. **1.** VS sends list of deaths to PAMR Coordinator
2. **2.** Coordinator requests medical and social services records for all deaths
3. **3.** Coordinator abstracts records into MMRIA to create a standardized, de-identified case summary form
4. **4.** Case summary form is presented to multidisciplinary committee of experts for review
5. **5.** Committee determines if death was pregnancy-related and identifies factors associated with death
6. **6.** Data from committee meetings entered into MMRIA to allow analyses of death data
7. **7.** Recommends interventions to prevent maternal deaths

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ODH PAMR Data

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2008-2016

Of 610 pr

186 (31 p eaning
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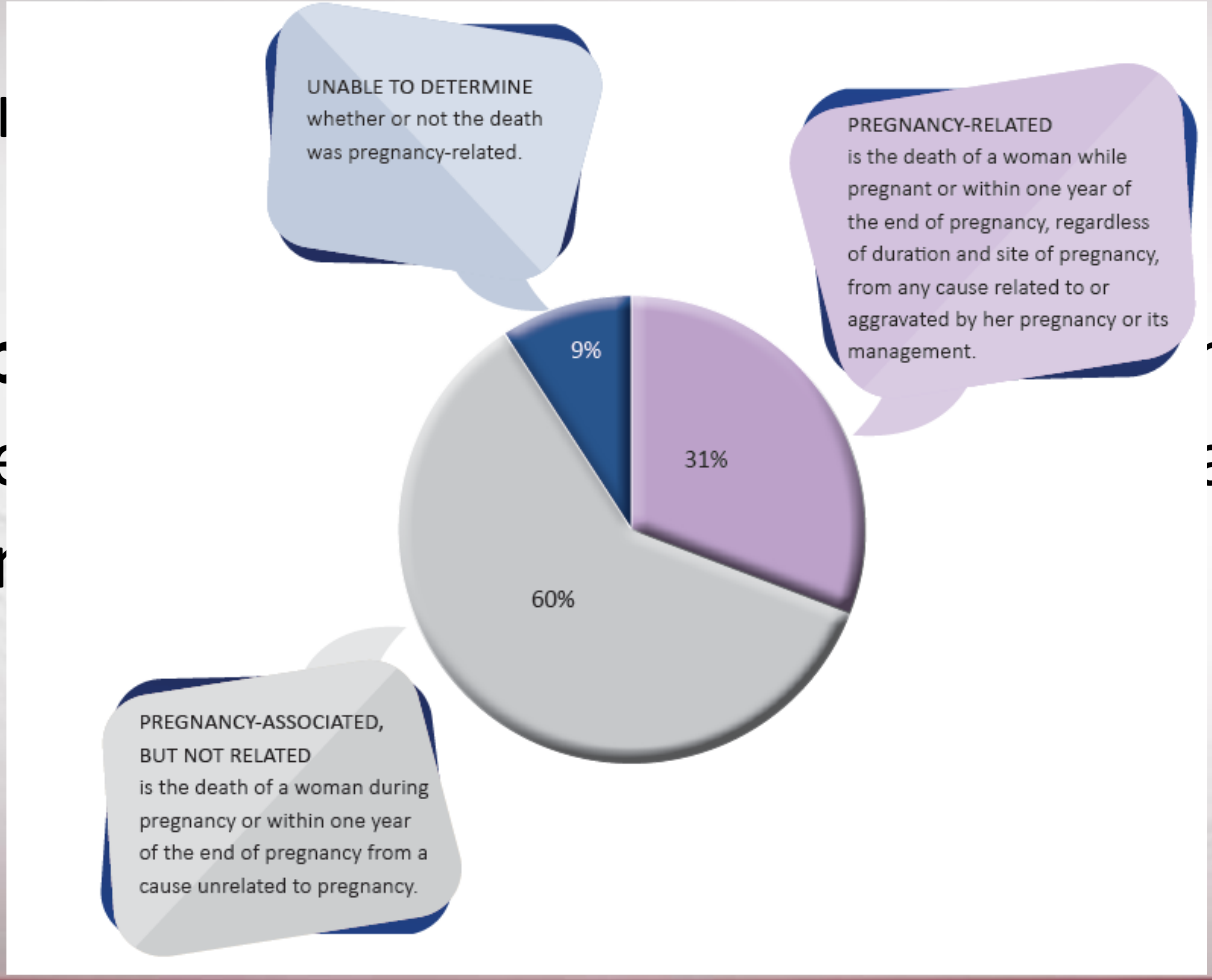

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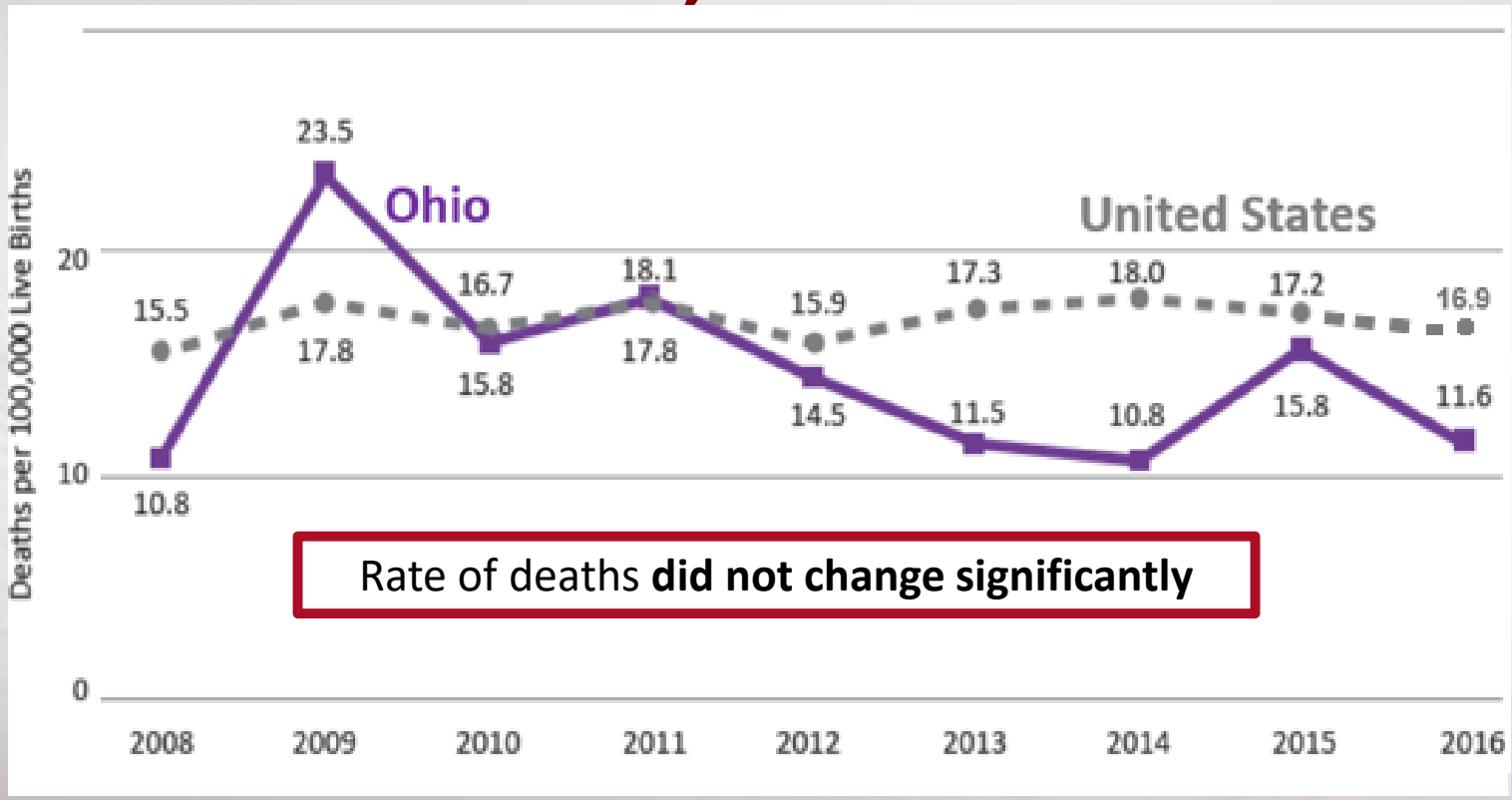
Ohio and U.S. Pregnancy-Related Mortality Ratios, 2008-2016



Note: U.S. and Ohio surveillance methods differ. Both include women who died during pregnancy or within one year of pregnancy. However, in contrast to the Ohio PAMR process, the U.S. process is based entirely on vital statistics data submitted to CDC by states; medically trained epidemiologists determine the cause and time of death related to the pregnancy (CDC Pregnancy Mortality Surveillance System [PMSS]).

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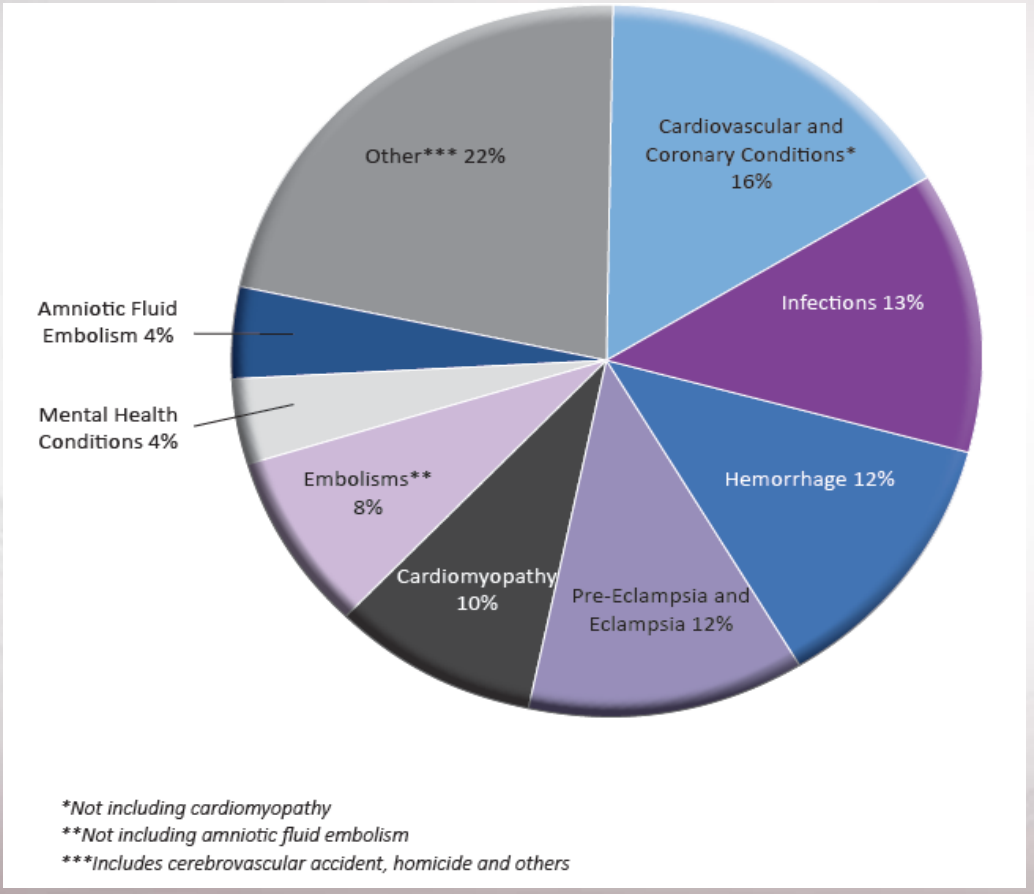
Underlying Causes of Pregnancy-Related Deaths by Leading Causes, Ohio 2008-2016



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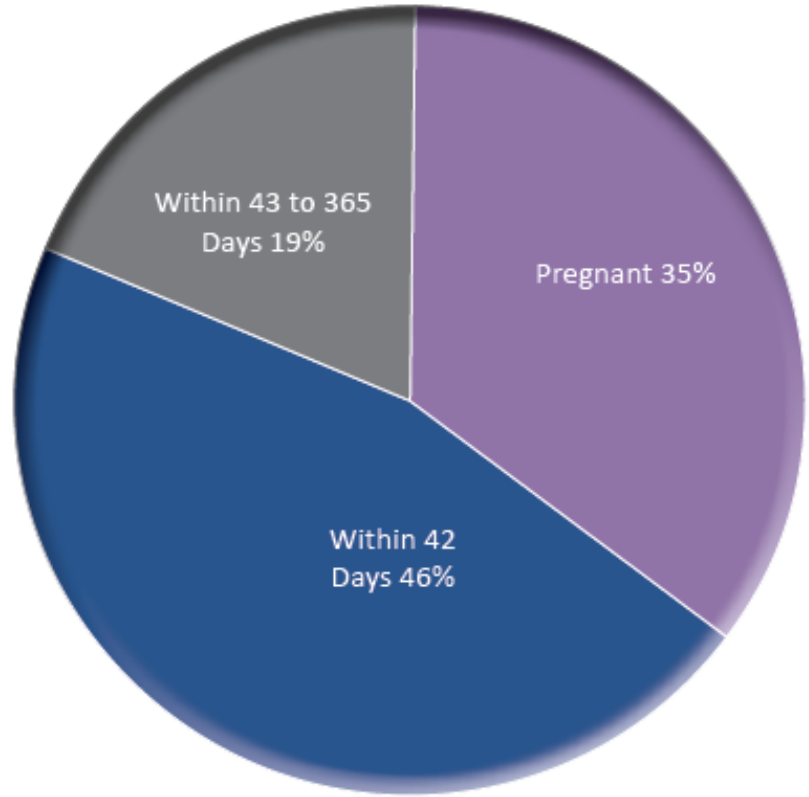
Timing of Pregnancy-Related Death in Relation to Pregnancy, Ohio 2008-2016



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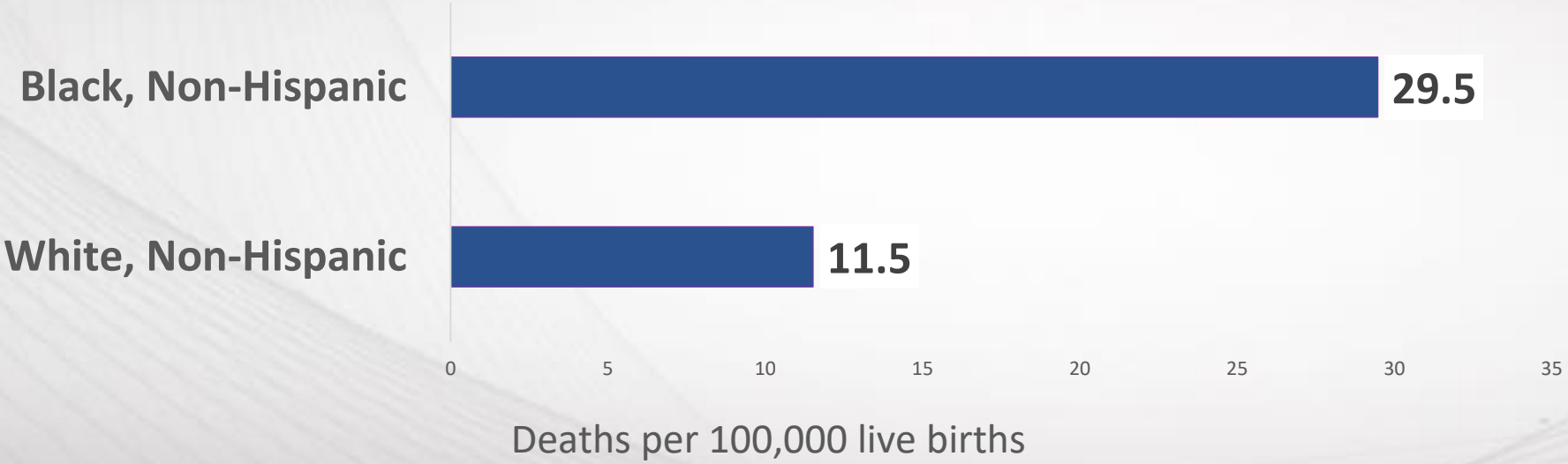
Disparities in Pregnancy-Related Deaths: by Race



Black women died at a rate > 2 ½ times that of white women

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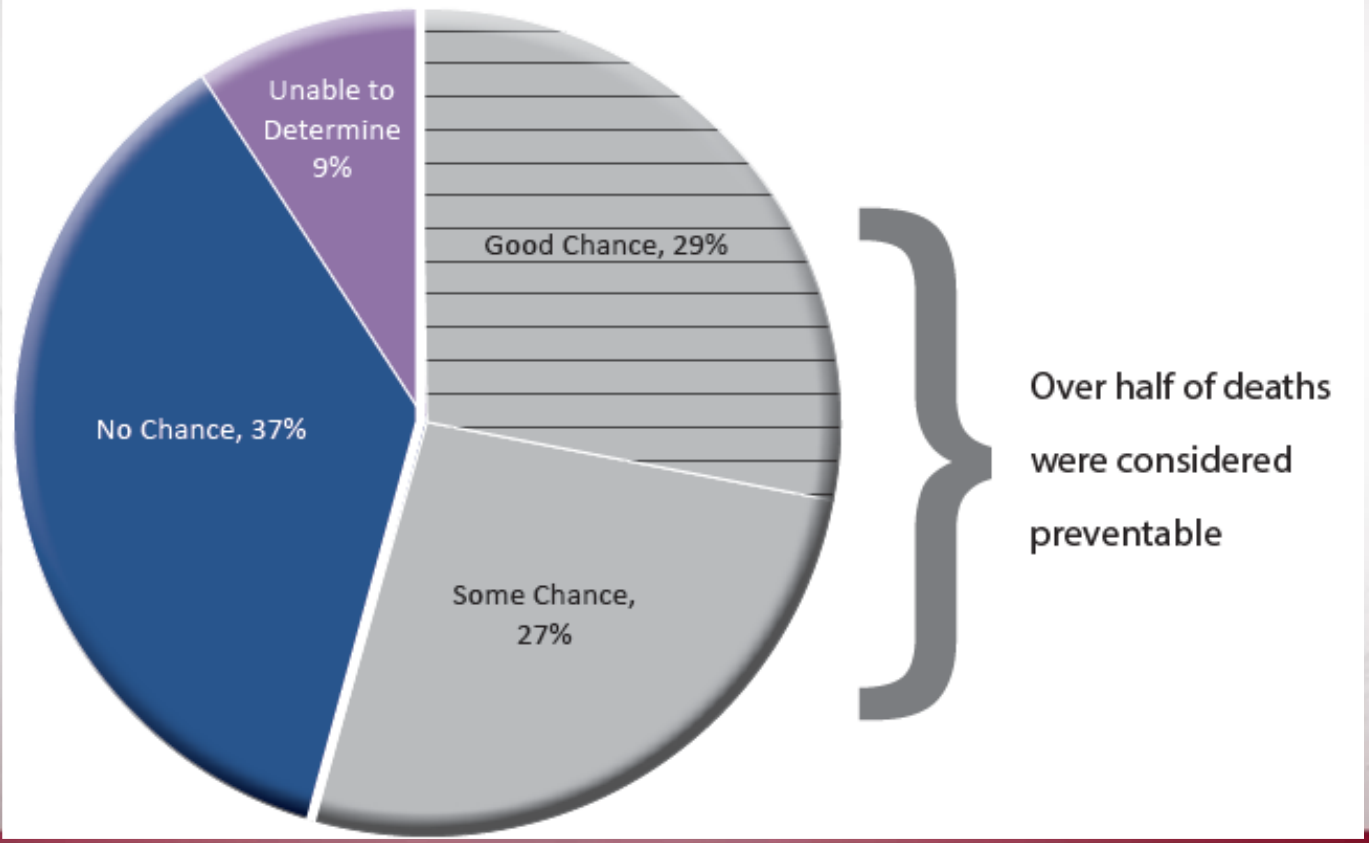
Chance to Alter Outcome Among Pregnancy-Related Deaths (n=86), Ohio 2012-2016



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Preventability by Cause of Death, 2012-2016

Underlying Cause of Death	Preventable %	Preventable number	Total number
Cardiovascular & Coronary Conditions	29	4	14
Pre-eclampsia & Eclampsia	85	11	13
Hemorrhage	64	7	11
Infections	64	7	11
Embolisms (not AF)	56	5	9
Cardiomyopathy	75	6	8
Amniotic Fluid Embolism	20	1	5
Cerebrovascular Accidents	25	1	4
Mental Health Conditions	100	3	3

Contributing Factors

- Factors identified that contributed to the death
- **Four** factors on average were identified for every pregnancy-related death
- Levels:

Provider *(32%)*

system of care or facility *(22%)*

patient or family *(46%)*

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Contributing Factors: *Provider Level*

- failure to adequately screen or assess risk
- mis-diagnosis
- use of ineffective treatment
- delays in diagnosis, treatment, or follow-up
- failure to refer or seek consultation
- lack of communication between providers
- lack of continuity of care
- inadequate patient education

Contributing Factors: *Systems or facility Level*

- lack of continuity of care from a system perspective
- lack of or insufficient case coordination or management
- systems barriers to accessing care (e.g., insurance, provider shortage, transportation)
- unavailable facilities
- inadequate, unavailable, or inadequately trained personnel
- inadequate follow-up by personnel
- lack of or poor communication (e.g., between providers)
- lack of standardized policies or procedures
- inadequate or unavailable equipment / technology

Contributing Factors: P*atient or Family Level*

- chronic disease (e.g., obesity, chronic medical condition)
- lack of knowledge (re: importance of event, follow-up)
- adherence
- mental health conditions
- delay or failure to seek care
- substance use disorder (alcohol, illicit drugs, Rx abuse)
- tobacco
- violence (intimate partner, prior assault)
- social support, isolation, or dysfunctional
- access / financial (lack of $ resources, poverty, housing)

ODH PAMR New Activities

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ODH PAMR: Two 5-year Federal Grant Awards

2019-2024

CDC: $450,000/year

HRSA: ~$2million/year

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ODH PAMR Recently Received 2 Federal Awards

CDC

Enhancing Reviews and Surveillance to Eliminate Maternal Mortality (ERASE MM) Program

- Facilitate an understanding of the drivers of maternal mortality and complications of pregnancy and better understand the associated disparities.
- Determine what interventions at patient, provider, facility, system, and community levels will have the most effect.
- Inform the implementation of initiatives in the right places for families and communities who need them most.

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HRSA

State Maternal Health Innovation Program

Translating recommendations on addressing maternal mortality and SMM from ideas to action by:

1) Establishing a state-focused Maternal Health Task Force to create and implement a strategic plan.
2) Improving the collection, analysis, and application of state-level data on maternal mortality and SMM.
3) Promote and execute innovation in maternal health service delivery.

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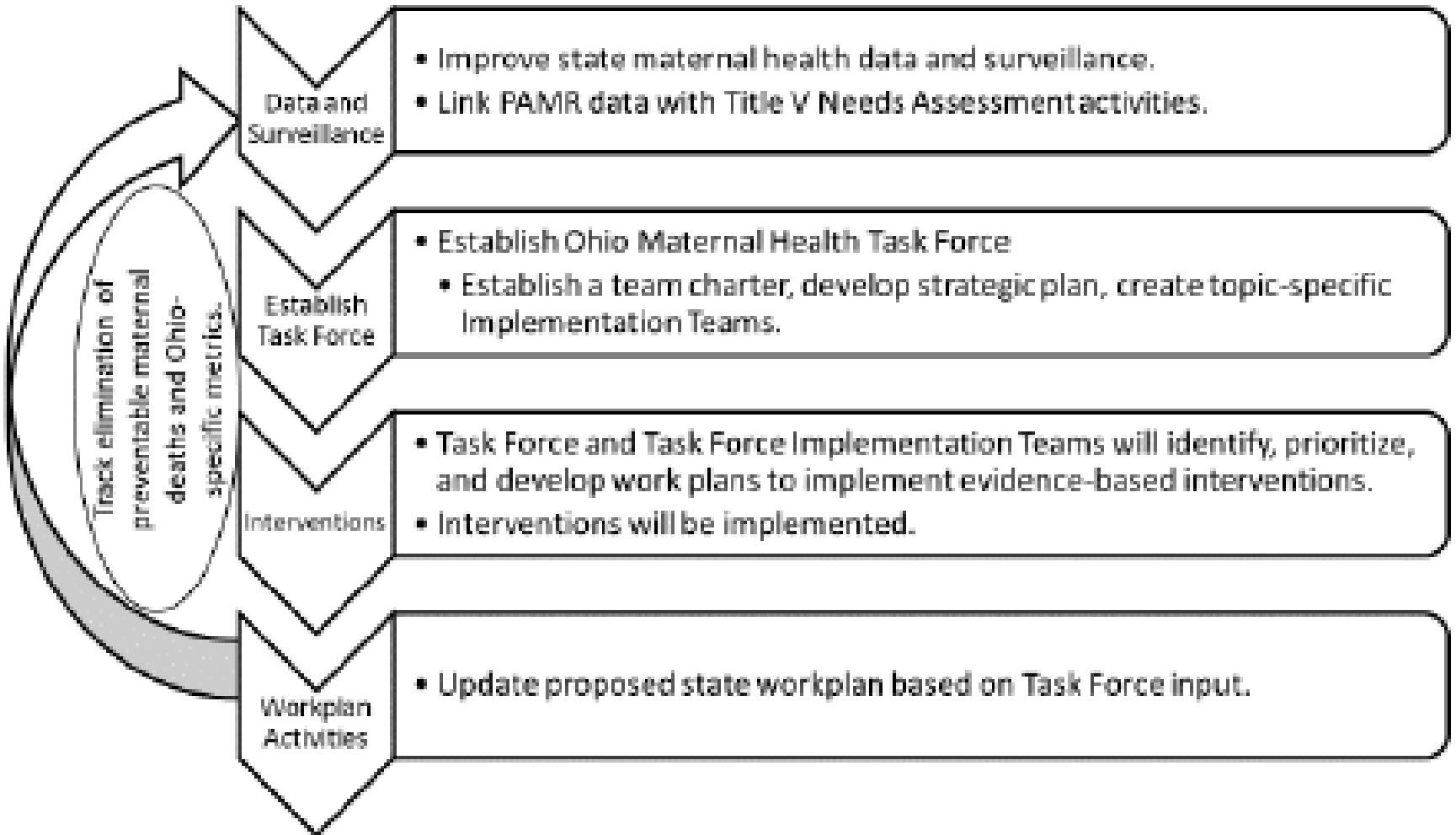
Ohio Maternal Health Task Force

Goal: Create and implement a strategic plan statewide



Quality Improvement

- AIM Implementation
  - Submit state AIM application to ACOG
  - Hypertension bundle (statewide)
  - Racial Disparity bundle (community level)
  - *[Tentative]* Cardiovascular bundle (statewide)
- Other QI Activities
  - AWHONN post-birth warning signs (community level)
  - IMPLICIT Network toolkit with pediatric practices (interconception health)

Promote and Execute Innovation

- Conduct implicit bias training
  - ODH Home Visiting, WIC, among others
- Expand simulation training for obstetric emergencies to emergency medicine staff
- Train OB providers on implementing telehealth encounters
  - Implementation Team on telehealth informs training activities
- Implement LOCATe

PAMR Grants: Next Steps

- Hire new staff
- Contracts for vendors
- Establish and initiate the Ohio Maternal Health Task Force

QUESTIONS?

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Contact Information

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Disparities in Pregnancy-Related Deaths