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

Maternal Mortality Prevention Team
Maternal Infant Health Branch
CDC Division of Reproductive Health
Objectives

• Provide an overview of existing data and ERASE Maternal Mortality program (brief data, importance of standardization)
• Practice improving maternal mortality data through comprehensive case review
• Describe actionable recommendations
• Present examples of data to action
We are here because...
Every Maternal Death is a Tragedy

700

Each year in the U.S., about 700 women die as a result of pregnancy complications

Pregnancy-Related Mortality in the U.S., PMSS* 1999-2017

Pregnancy-related deaths per 100,000 live births

*CDC Pregnancy Mortality Surveillance System
Native American/Alaska Native and Black Women are 2 to 3 times more likely to die of pregnancy-related causes than White women.

The data we have

<table>
<thead>
<tr>
<th>Data Source</th>
<th>National (CDC) – National Vital Statistics System (NVSS)</th>
<th>National (CDC) – Pregnancy Mortality Surveillance System (PMSS)</th>
<th>State and Local Maternal Mortality Review Committees (MMRCs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time Frame</td>
<td>During pregnancy – 42 days</td>
<td>During pregnancy – 1 year</td>
<td>During pregnancy – 1 year</td>
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<tr>
<td>Source of Classification</td>
<td>ICD-10 codes</td>
<td>Medical epidemiologists</td>
<td>Multidisciplinary committees</td>
</tr>
<tr>
<td>Measure</td>
<td>Maternal Mortality Rate - # of Maternal Deaths per 100,000 live births</td>
<td>Pregnancy Related Mortality Ratio - # of Pregnancy Related Deaths per 100,000 live births</td>
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<tr>
<td>Purpose</td>
<td>Show national trends and provide a basis for international comparison</td>
<td>Analyze clinical factors associated with deaths, publish information that may lead to prevention strategies</td>
<td>Understand medical and non-medical contributors to deaths, prioritize interventions that effectively reduce maternal deaths</td>
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</tbody>
</table>

Existing Maternal Mortality Review Committees (MMRCs)

Updated 07/27/2021
Purpose of ERASE MM

Through the ERASE MM initiative CDC supports agencies to:

- Identify pregnancy-associated deaths
- Abstract clinical and non-clinical data into MMRIA
- Conduct multidisciplinary reviews
- Enter committee decisions into MMRIA
- Improve data quality and timeliness
- Analyze data
- Share findings
- Inform prevention strategies
Purpose of ERASE MM

Through the ERASE MM initiative CDC supports agencies to:
- Identify pregnancy-associated deaths
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- Analyze data
- Share findings
- Inform prevention strategies

This activity supports a nationwide approach to collecting and sharing data on maternal deaths
Improving Maternal Mortality Data

• Part of an ongoing quality improvement cycle
• Incorporates multidisciplinary expertise, typically staffed by/hosted by public health agency
• Leads to understanding of the drivers of a maternal death and determination of what interventions will have the most impact at patient, provider, facility, system and community level to prevent future deaths
Guiding Questions for Review Committees

• Was the death pregnancy-related?
• What was the underlying cause of death?
• Was the death preventable?
• What are the contributing factors to the death?
• What specific and feasible actions might have changed the course of events?

Sourced from: Review to Action (https://reviewtoaction.org/)
Present selected cases to the MMRC using the case narrative.

MMRC discusses and makes key decisions about each death.

Enter key decisions into MMRIA.
Present *selected* cases to the MMRC using the case narrative

MMRC discusses and makes key decisions about each death

Enter key decisions into MMRIA
Review: Present selected cases

**MMRIA MOCK CASE: CARDIOMYOPATHY CASE NARRATIVE**

She died with cause of death listed on the death certificate as cardiogenic shock secondary to non-ST elevated myocardial infarction (NSTEMI), six weeks after delivery. Medical history was significant for having a brother who passed away from cardiac disease at a young age. Pre-pregnancy body mass index was elevated and history of smoking. Entry into prenatal care was at 36 weeks with four visits at a hospital clinic with an obstetrician. There were no noted health events prior to delivery. She presented to hospital at 37 weeks gestation with induction/augmentation of labor. On admission, she requested that her sister adopt infant and...
Present *selected* cases to the MMRC using the case narrative

MMRC discusses and makes key decisions about each death

Enter key decisions into MMRIA
**Review:** Discuss and decide

**MMRC discusses and makes key decisions about each death**
MMRIA Committee Decisions Form
What does it provide?

- A synthesis of various forms from MMRCs around the U.S.
- A common language for MMRCs
- A way to collect data that feeds ACTION!
Data that Feeds Action

- Maternal Morbidity Resulting in Primary Care Visit
- Maternal Morbidity Resulting in Emergency Department Visit
- Maternal Morbidity Requiring Hospitalization
- Severe Maternal Morbidity
- Near Misses
- Deaths

Cascading Effects of Review Committee Actions

Eliminate preventable maternal deaths

Reduce maternal morbidity

Improve population health of women
What does the form NOT provide?

- A perfect way to cleanly capture every possible cause, manner and contributor to every possible maternal death

...and never will
She died with cause of death listed on the death certificate as cardiogenic shock secondary to peripartum cardiomyopathy due to non-ST elevated myocardial infarction (NSTEMI), six weeks after delivery. Medical history was significant for developing heart failure and asthma after her delivery in 2005. Pre-pregnancy body mass index (BMI) was 33.8. Her family medical history was significant for having a brother who passed away from cardiac disease at age 19.

Entry into prenatal care was at 36 weeks with four visits at a hospital clinic with an obstetrician (OB). Prenatal history was significant for late entry into care and anemia. There were no referrals made during the prenatal period. The sentinel pregnancy was her 6th. She had a past OB history of 4 preterm births. There were no noted health events prior to delivery.

She presented to hospital at 38.3 weeks’ gestation for induction/augmentation of labor. On admission, she requested that her sister adopt infant and a social service consult was made. Delivery was by an OB, method was spontaneous vaginal delivery with epidural anesthesia. No obstetric complications noted. Infant was 38 weeks’ gestation and weighed 7 lbs., 2 oz., Apgar scores were 9 and 9. Day after delivery, she developed dry cough, chest x-ray (CXR) was negative. Social service consult completed for adoption request but due to potential for lengthy paternity legal issues, adoption plans were to be formalized after discharge. Mother and infant were discharged to home.

She had an early postpartum visit at 2 weeks. At visit, she complained of being tired and still having pain. Edema noted in lower extremities, and she was encouraged to ambulate more and quit smoking. Advised to continue with Motrin every 6 hours for pain and to call if pain does not go away. Two days later, she presented to emergency department (ED) (same as delivery facility) with complaints of right-sided chest pain and shortness of breath x 2 hours. Studies negative for pulmonary embolus. CXR and CT scan noted cardiomegaly consistent with postpartum state. EKG noted sinus tachycardia. Pain relieved with narcotics, and she was discharged home with instructions to follow up with her primary care physician. Three weeks later, she presented to a different ED c/o shortness of breath and chest pain. She was diagnosed with NSTEMI and cardiogenic shock and admitted to ICU. Seven hours after admission, she was transferred out to higher level cardiac care. Cardiac catheterization was completed. Cardiac support given but she died seven days after admission. The case was not referred to the medical examiner and no autopsy was performed.
Six key questions of MMRCs

1. Was the death pregnancy-related?
2. What was the underlying cause of death?
3. Was the death preventable?
4. What factors contributed to the death?
5. What are recommendations that address the contributing factors?
6. What are the expected impacts if those recommendations were acted on?
Pregnancy-Relatedness

PREGNANCY-RELATEDNESS: SELECT ONE

- PREGNANCY-RELATED
  The death of a woman during pregnancy or within one year of the end 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
  The death of a woman during pregnancy or within one year of the end of pregnancy from a cause that is not related to pregnancy.

- PREGNANCY-ASSOCIATED BUT UNABLE TO DETERMINE PREGNANCY-RELATEDNESS

- NOT PREGNANCY-RELATED OR -ASSOCIATED
  (i.e. false positive, woman was not pregnant within one year of her death)
### Pregnancy-Relatedness

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- **NOT PREGNANCY-RELATED OR ASSOCIATED**
  (i.e. false positive, woman was not pregnant within one year of her death)

---

If she had not been pregnant would she have died?
COMMITTEE DETERMINATION OF CAUSE(S) OF DEATH

IF PREGNANCY-RELATED, COMMITTEE DETERMINATION OF UNDERLYING* CAUSE OF DEATH
Refer to page 5 for PMSS-MM cause of death list.

80.1 - Postpartum/Peripartum Cardiomyopathy

PREGNANCY-RELATEDNESS: SELECT ONE

- PREGNANCY-RELATED
  A death during pregnancy or within one year of the end 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
  A death during pregnancy or within one year of the end of pregnancy from a cause that is not related to pregnancy

- PREGNANCY-ASSOCIATED BUT UNABLE TO DETERMINE PREGNANCY-RELATEDNESS

OPTIONAL CAUSE (DESCRIPTIVE)

- UNDERLYING*
  Peripartum cardiomyopathy

- CONTRIBUTING

- IMMEDIATE

- OTHER SIGNIFICANT

COMMITTEE DETERMINATIONS ON CIRCUMSTANCES SURROUNDING DEATH

- DID OBESITY CONTRIBUTE TO THE DEATH? 
  YES ☑ PROBABLY NO UNKNOWN

- DID DISCRIMINATION** CONTRIBUTE TO THE DEATH? 
  YES ☑ PROBABLY NO UNKNOWN

- DID MENTAL HEALTH CONDITIONS OTHER THAN SUBSTANCE USE DISORDER CONTRIBUTE TO THE DEATH? 
  YES ☑ PROBABLY NO UNKNOWN

- DID SUBSTANCE USE DISORDER CONTRIBUTE TO THE DEATH? 
  YES ☑ PROBABLY NO UNKNOWN

MANNER OF DEATH

- WAS THIS DEATH A SUICIDE? 
  YES ☑ PROBABLY NO UNKNOWN

- WAS THIS DEATH A HOMICIDE? 
  YES ☑ PROBABLY NO UNKNOWN

- IF ACCIDENTAL DEATH, MURDER, OR SUICIDE, LIST THE MEANS OF FATAL INJURY
  - FIREARM
  - SHARP INSTRUMENT
  - BLUNT INSTRUMENT
  - POISONING/ OVERDOSE
  - HANGING/ STRANGULATION/ SUFICATION

- IF HOMICIDE, WHAT WAS THE RELATIONSHIP OF THE PERPETRATOR TO THE DECEASED? 
  - NO RELATIONSHIP
  - PARTNER
  - EX-PARTNER
  - OTHER RELATIVE

- IF MURDER, WHAT WAS THE RELATIONSHIP OF THE PERPETRATOR TO THE DECEASED? 
  - NO RELATIONSHIP
  - PARTNER
  - EX-PARTNER
  - OTHER RELATIVE

*Underlying cause refers to the disease or injury that initiated the chain of events leading to death or the circumstances of the accident or violence which produced the fatal injury.

**Encompasses Discrimination, Interpersonal Racism, and Structural Racism as described on page 4.
Why?

Aggregate at end of year(s) of review; consider whether you need better access to records and use this data to communicate that to relevant stakeholders.
Why?

Highlight differences in committee findings vs. death certificate findings

**DOES THE COMMITTEE AGREE WITH THE UNDERLYING* CAUSE OF DEATH LISTED ON DEATH CERTIFICATE?**

- [ ] YES
- [ ] NO
Underlying Cause of Death

The disease or injury which initiated the train of events leading directly to death, or the circumstances of the accident or violence which produced the fatal injury.
Underlying Cause
the disease or injury which initiated the train of events leading directly to death, or the circumstances of the accident or violence which produced the fatal injury
Improving Cause of Death Reporting
Committee Decisions: Underlying Cause of Death

Optional:

<table>
<thead>
<tr>
<th>TYPE</th>
<th>OPTIONAL: CAUSE (DESCRIPTIVE)</th>
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<tbody>
<tr>
<td>UNDERLYING*</td>
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<td>CONTRIBUTING</td>
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<td>OTHER SIGNIFICANT</td>
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<tr>
<td>Committee Determinations on Circumstances Surrounding Death</td>
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<td>-----------------------------------------------------------</td>
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<tr>
<td><strong>DID OBESITY CONTRIBUTE TO THE DEATH?</strong></td>
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<tr>
<td>[ ] YES [ ] PROBABLY [ ] NO [ ] UNKNOWN</td>
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<td><strong>DID DISCRIMINATION</strong> CONTRIBUTE TO THE DEATH?</td>
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<td><strong>DID MENTAL HEALTH CONDITIONS OTHER THAN</strong></td>
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<td><strong>DID SUBSTANCE USE DISORDER CONTRIBUTE TO THE DEATH?</strong></td>
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<td>[ ] FIRE OR BURNS</td>
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<td>[ ] MOTOR VEHICLE</td>
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<td>[ ] OTHER, SPECIFY:</td>
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<td>☐ MOTOR VEHICLE ☐ INTENTIONAL NEGLECT ☐ OTHER, SPECIFY: ☐ UNKNOWN ☐</td>
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<td>☐ OTHER, SPECIFY: ☐ UNKNOWN ☐ NOT APPLICABLE</td>
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</table>
Committee Decisions: Preventability

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, provider, facility, system and/or community factors.
COMMITTEE DETERMINATION OF PREVENTABILITY

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, provider, facility, system and/or community factors.

WAS THIS DEATH PREVENTABLE?  
- YES  
- NO

CHANCE TO ALTER OUTCOME  
- GOOD CHANCE  
- SOME CHANCE  
- NO CHANCE  
- UNABLE TO DETERMINE

CONTRIBUTING FACTORS AND RECOMMENDATIONS FOR ACTION  
(Entries may continue to grid on page 5)

CONTRIBUTING FACTORS WORKSHEET

What were the factors that contributed to this death? Multiple contributing factors may be present at each level.

<table>
<thead>
<tr>
<th>DESCRIPTION OF ISSUE</th>
<th>CONTRIBUTING FACTORS (choose as many as needed below)</th>
<th>LEVEL</th>
<th>COMMITTEE RECOMMENDATIONS [Who?] should [do what?] [when?] Map recommendations to contributing factors.</th>
<th>LEVEL</th>
<th>PREVENTION TYPE (choose below)</th>
<th>EXPECTED IMPACT (choose below)</th>
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Recommendations are structured to denote at which level preventability may have occurred:

| **WHO** is the entity/agency who would have been/be responsible for the intervention?* |
| **WHAT** is the intervention and **WHERE** is the intervention point? |
| **WHEN** is the proposed intervention point?* |
| o Patient/Family | o Provider | o Facility | o System | o Community |
| • Among women of reproductive age (“preconception”) |
| • During and after pregnancy |
| o Labor & Delivery (L&D) |
| o Prior to L&D hospitalization discharge |
| o First 6 weeks after pregnancy |
| o 42-365 days after pregnancy |

*Enter recommendation at the relevant level (Patient/Family, Provider, Facility, System, Community).
Contributing Factors and Recommendations for Action

### Contributing Factors Worksheet

What were the factors that contributed to this death? Multiple contributing factors may be present at each level.

<table>
<thead>
<tr>
<th>Description of Issue (enter a description for each contributing factor listed)</th>
<th>Contributing Factors (choose as many as needed below)</th>
<th>Level</th>
<th>Committee Recommendations (Who? should (do what?) where?)</th>
<th>Map recommendations to contributing factors.</th>
<th>Level</th>
<th>Prevention Type (choose below)</th>
<th>Expected Impact (choose below)</th>
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### Contributing Factor Key

#### Definitions of Levels
- **Patient/Family:** An individual before, during, or after a pregnancy, and their family, internal or external to the household, with influence on the individual.
- **Provider:** An individual with training and expertise who provides care, treatment, and/or advice.
- **Facility:** A physical location where direct care is provided - ranges from small clinics and urgent care centers to hospitals with trauma centers.
- **System:** Interacting entities that support services before, during, or after a pregnancy - ranges from healthcare systems and payors to public services and programs.
- **Community:** A grouping based on a shared sense of place or identity - ranges from physical neighborhoods to a community based on common interests and shared circumstances.

#### Prevention Type
- **Primary:** Prevents the contributing factor before it ever occurs.
- **Secondary:** Reduces the impact of the contributing factor once it has occurred (e.g., treatment).
- **Tertiary:** Reduces the impact or progression of what has become an ongoing contributing factor (e.g., management of complications).

#### Expected Impact
- **Small:** Education/counseling (community- and/or provider-based health promotion and educational activities).
- **Medium:** Clinical intervention and coordination of care across continuum of well-woman visits (protocols, prescriptions).
- **Large:** Long-lasting protective intervention (improve readiness, recognition, and response to obstetric emergencies/LARC).
- **Extra Large:** Change in context promote environments that support healthy living (ensure available and accessible services).
- **Giant:** Address social determinants of health (poverty, inequality, etc.).
<table>
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<td>(DESCRIPTIONS ON PAGE 4)</td>
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- Access/financial
- Adherence
- Assessment
- Chronic disease
- Clinical skill/quality of care
- Communication
- Continuity of care/care coordination
- Cultural/religious
- Delay
- Discrimination
- Environmental
- Equipment/technology
- Interpersonal racism
- Knowledge
- Law Enforcement
- Legal
- Mental health conditions
- Outreach
- Policies/procedures
- Referral
- Social support/isolation
- Structural racism
- Substance use disorder - alcohol, illicit/prescription drugs
- Tobacco use
- Trauma
- Unstable housing
- Violence
- Other
CONTRIBUTING FACTORS AND RECOMMENDATIONS FOR ACTION (Entries may continue to grid on page 5)

CONTRIBUTING FACTORS WORKSHEET
What were the factors that contributed to this death? Multiple contributing factors may be present at each level.

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<tr>
<th>DESCRIPTION OF ISSUE (enter a description for EACH contributing factor listed)</th>
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CONTRIBUTING FACTOR KEY (DESCRIPTIONS ON PAGE 4)

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- Delay
- Discrimination
- Environmental
- Equipment/technology
- Interpersonal racism
- Knowledge
- Law Enforcement
- Legal
- Mental health conditions
- Outreach
- Policies/procedures
- Referral
- Social support/isolation
- Structural racism
- Substance use disorder - alcohol, illicit/prescription drugs
- Tobacco use
- Trauma
- Unstable housing
- Violence
- Other

See Pg. 4 for factor descriptions

MMRIA committee decisions form (https://reviewtoaction.org/content/maternal-mortality-review-committee-decisions-form)
Contributing Factor Descriptions

LACK OF ACCESS/FINANCIAL RESOURCES
System issues, e.g., lack of or loss of healthcare insurance or other financial status, as opposed to woman's noncompliance, impacted woman's ability to care for herself (e.g., did not seek services because able to miss work or afford postpartum visits after insurance expired). Other barriers to accessing care: Insurance non-eligibility, provider shortages in woman's geographical area, and lack of public transportation.

ADHERENCE TO MEDICAL RECOMMENDATIONS
The provider or patient did not follow protocol or failed to comply with standard procedures (i.e. non-adherence to prescribed medications).

FAILURE TO SCREEN/INADEQUATE ASSESSMENT OF RISK FACTORS
Placing the woman at risk for a poor clinical outcome recognized, and the woman was not transferred/transported to a provider able to give a higher level of care.

CHILDHOOD SEXUAL ABUSE/TRAUMA
The patient experienced rape, molestation, or one or more of the following: sexual exploitation during childhood plus persuasion, inducement, or coercion of a child to engage in sexually explicit conduct, physical or emotional abuse or violence other than that related to sexual abuse during childhood.

CHRONIC DISEASE
Occurrence of one or more significant pre-existing medical conditions (e.g. obesity, cardiovascular disease, or diabetes).

CLINICAL SKILL/QUALITY OF CARE (PROVIDER OR FACILITY PERSPECTIVE)
Perceived to not be appropriately skilled for the situation or did not exercise clinical judgment consistent with current standards of care (e.g. error in the preparation or administration of medication or unavailability of translation services).

POOR COMMUNICATION/LACK OF CARE COORDINATION OR MANAGEMENT/LACK OF CONTINUITY OF CARE (SYSTEM PERSPECTIVE)
Care was fragmented (i.e. uncoordinated or not comprehensive) among or between healthcare facilities or units, (e.g. records not readily available between inpatient and outpatient settings or within the hospital, such as Emergency Department and Labor and Delivery).

LACK OF CONTINUITY OF CARE (PROVIDER OR FACILITY PERSPECTIVE)
Care providers did not have access to woman's complete records or did not communicate woman's status sufficiently. Lack of continuity can be between prenatal, labor and delivery, and postpartum providers.

CULTURAL/RELIGIOUS OR LANGUAGE FACTORS
Demonstrated that any of these factors was either a barrier to care due to lack of understanding, or led to refusal of therapy due to beliefs (or belief systems).

DELAY
The provider or patient was delayed in referring or accessing care, treatment, or follow-up care/acton.

DISCRIMINATION
Treating someone less or more favorably based on the group, class or category they belong to resulting from bias, prejudices, and stereotyping, it can manifest as differences in care, clinical communication and shared decision-making (Smiddy et al, 2003 and Dr. Rachel Hardeman).

ENVIRONMENTAL FACTORS
Factors related to weather or social environment.

INADEQUATE OR UNAVAILABLE EQUIPMENT/TECHNOLOGY
Equipment was missing, unavailable, or not functional (e.g. absence of blood tubing connector).

INTERPERSONAL RACISM
Discrimination behaviors between individuals based on differential assumptions about the abilities, motives, and intentions of others and resulting in differential actions toward others based on their race; it can be conscious as well as unconscious, and it includes acts of commission and acts of omission, it manifests as lack of respect, rejection, devaluation, stigmatization, and denigration. (Jones, CP, 2000 and Dr. Cornelia Graves).

KNOWLEDGE - LACK OF KNOWLEDGE REGARDING IMPORTANCE OF EVENT OR OF TREATMENT OR FOLLOWUP
The provider or patient did not receive adequate education or lacked knowledge or understanding regarding the significance of a health event (e.g. shortness of breath as a trigger to seek immediate care) or lacked understanding about the need for treatment/follow-up after evaluation for a health event (e.g. needed to keep appointment for psychiatric referral after an IUD was found for evaluation of depression).

INADEQUATE LAW ENFORCEMENT RESPONSE
Law enforcement response was not in a timely manner or was inappropriate or thorough in scope.

LEGAL
Legal considerations that impacted outcome.

MENTAL HEALTH CONDITIONS
The patient carried a diagnosis of a psychiatric disorder. This includes postpartum depression.

INADEQUATE COMMUNITY OUTREACH/RESOURCES
Lack of coordination between healthcare system and other outside agencies/organizations in the geographic/cultural area that work with maternal health issues.

LACK OF STANDARDIZED POLICIES/PROCEDURES
The facility lacked basic policies or procedures germane to the woman's needs (e.g. response to high blood pressure, or a lack of or outdated policy or protocol).

LACK OF REFERRAL OR CONSULTATION
Specialists were not consulted or did not provide care referrals to specialists, were not made.

STRUCTURAL RACISM
The systems of power based on historical injustices and contemporary social factors that systematically disadvantage people of color and advantage white people through inequities in housing, education, employment, earnings, benefits, credit, media, health care, criminal justice, etc. - (Adapted from Bailey JU, Lance, 2007 and Dr. Carla Ortego).

SOCIAL SUPPORT/SOLATION - LACK OF FAMILY/FRIEND OR SUPPORT SYSTEM
Social support from family, partner, or friends was lacking, inadequate, and/or dysfunctional.

SUBSTANCE USE DISORDER - ALCOHOL, ILICIT/ PRESCRIPTION DRUGS
Substance use disorder is characterized by recurrent use of alcohol and/or drugs causing clinically and functionally significant impairment, such as health problems or disability. The committee may determine that substance use disorder contributed to the death when the disorder directly compromised a woman's health status (e.g., acute methamphetamine intoxication exacerbated pregnancy-induced hypertension, or women were more vulnerable to infections or medical conditions).

TOBACCO USE
The patient's use of tobacco directly compromised the patient's health status (e.g. long-term smoking led to underlying chronic lung disease).

UNSTABLE HOUSING
Woman lived "on the street." In a homeless shelter, or in transitional or temporary circumstances with family or friends.

VIOLENCE AND INTIMATE PARTNER VIOLENCE (IPV)
Physical or emotional abuse perpetrated by current or former intimate partner, family member, or stranger.

OTHER
Contributing factor not otherwise mentioned. Please provide description.
## Contributing Factors

<table>
<thead>
<tr>
<th>Category</th>
<th>Class</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility</td>
<td>Access/Financial</td>
<td>Access to <strong>outpt</strong> records</td>
</tr>
<tr>
<td>Provider</td>
<td>Communication</td>
<td>No documentation of follow-up as referred by ED to PCP</td>
</tr>
<tr>
<td></td>
<td>Knowledge</td>
<td></td>
</tr>
<tr>
<td>Provider</td>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>System</td>
<td>Personnel</td>
<td>Inadequately trained personnel</td>
</tr>
<tr>
<td>System</td>
<td>Personnel</td>
<td>Unavailable personnel</td>
</tr>
</tbody>
</table>
But what could be done to prevent a future death?
Recommendations

• Developed collaboratively
• Align with contributing factors

“If there was at least some chance that the death could have been averted, what were the specific and feasible actions which, if implemented or altered, might have changed the course of events?”
# Mapping Contributing Factors to Recommendations

<table>
<thead>
<tr>
<th>DESCRIPTION OF ISSUE (enter a description for EACH contributing factor listed)</th>
<th>CONTRIBUTING FACTORS (choose as many as needed below)</th>
<th>LEVEL</th>
<th>COMMITTEE RECOMMENDATIONS [Who?] should [do what?] [when?] Map recommendations to contributing factors.</th>
<th>LEVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inadequate risk assessment of cardiac history</td>
<td>Assessment</td>
<td>Provider</td>
<td>Obstetric providers should refer patients with a reported cardiac condition to a cardiologist during prenatal care or between pregnancies</td>
<td>Provider</td>
</tr>
<tr>
<td>Lack of care coordination between prenatal/L&amp;D/ED</td>
<td>Continuity of care</td>
<td>Facility</td>
<td>MTFs should prioritize care coordination and communication between PNC clinics, L&amp;D wards and EDs</td>
<td>Facility</td>
</tr>
<tr>
<td>Postpartum instructions not provided</td>
<td>Communication</td>
<td>Facility</td>
<td>MTFs should routinely provide postpartum discharge instructions, including urgent maternal early warning signs</td>
<td>Facility</td>
</tr>
</tbody>
</table>

MMRIA committee decisions form ([https://reviewtoaction.org/content/maternal-mortality-review-committee-decisions-form](https://reviewtoaction.org/content/maternal-mortality-review-committee-decisions-form))
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<th>LEVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>translation services not utilized</td>
<td>Policies/procedure</td>
<td>Facility</td>
<td>MTFs should require all providers to use official translation services to discuss patient medical conditions, care, education and</td>
<td>Facility</td>
</tr>
<tr>
<td>obesity</td>
<td>Chronic disease</td>
<td>Patient/Farr</td>
<td>Base should increase access to and promote healthier food choices for all throughout their stay</td>
<td>System</td>
</tr>
<tr>
<td>chronic smoker</td>
<td>Tobacco use</td>
<td>Patient/Farr</td>
<td>Base should provide tobacco cessation programming and incentives to quit for all smokers</td>
<td>System</td>
</tr>
<tr>
<td>culturally and linguistically appropriate standards training for staff</td>
<td>Cultural/religious</td>
<td>Facility</td>
<td>MTFs should require all providers to undergo CLAS trainings and refreshers throughout their assignment</td>
<td>Facility</td>
</tr>
<tr>
<td>referral to resources for women positive for IPV</td>
<td>Social support/iso</td>
<td>Community</td>
<td>DHA should consider an education campaign for PNC providers re: resources avail. to victims of IPV during pregnancy and no period</td>
<td>System</td>
</tr>
</tbody>
</table>
Specific and Actionable Recommendations
Specific and Actionable Recommendations

_____ should ________     ________.
(who?)     (do what?)     (when?)
Specific and Actionable Recommendation

Obstetric providers should refer patients with a reported cardiac condition to a cardiologist during prenatal care or between pregnancies.
Specific and Actionable Recommendation

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**PREVENTION LEVEL**

- **PRIMARY:** Prevents the contributing factor before it ever occurs.
- **SECONDARY:** Reduces the impact of the contributing factor once it has occurred (i.e. treatment).
- **TERTIARY:** Reduces the impact or progression of an ongoing contributing factor once it has occurred (i.e. management of complications).

<table>
<thead>
<tr>
<th>LEVEL OF PREVENTION (SEE BELOW)</th>
<th>LEVEL OF IMPACT (SEE BELOW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>Medium</td>
</tr>
<tr>
<td>Secondary</td>
<td>Small</td>
</tr>
<tr>
<td>Secondary</td>
<td>Small</td>
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<tr>
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<td>Small</td>
</tr>
<tr>
<td>Primary</td>
<td>Medium</td>
</tr>
<tr>
<td>Primary</td>
<td>Large</td>
</tr>
</tbody>
</table>
Committee Decisions: Recommendations and Impact

- Small: Education / Counseling
- Medium: Clinical intervention and Coordination of Care
- Large: Long-lasting protective interventions
- Extra Large: Change in context
- Giant: Address Social Determinants of Health
Examples of data to action
## Data to Action Examples

<table>
<thead>
<tr>
<th>State</th>
<th>Success</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illinois</td>
<td>Medicaid expansion from 60 days to one year postpartum.</td>
</tr>
<tr>
<td>Washington</td>
<td>Legislative change so that hospitals and birthing centers report deaths during or within 42 days of pregnancy to coroner or ME, with autopsy strongly advised.</td>
</tr>
<tr>
<td>Utah</td>
<td>Developed the Maternal Mental Health Resource Network in which women and clinicians can search for providers that have been specifically trained in maternal mental health screening and treatment.</td>
</tr>
</tbody>
</table>
It’s okay to experience other emotions besides happy.

Facts about postpartum depression in dads everyone should be aware of

@maternalmentalhealthutah

"If our goal is to be happy all the time, then we block ourselves from vital elements of the human experience that help... more"

@maternalmentalhealthutah If this is you, leave us a ❤️ below... more

@maternalmentalhealthutah 🤱 Did you know partners can experience postpartum depression and anxiety, too? Let’s talk about dads and... more
Setting up for Success

- Complete
- Timely
- Accurate
- Consistent
- Data Quality
Setting up for Success

Process

Quality

Complete

Timely

Consistent

Accurate
Strengthening the Data

- CDC provides training and work groups on gaps, such as case identification
- MMRCs using comparable forms will provide comprehensive data
- Progress toward comparable data signals a tremendous step forward in addressing maternal mortality
- MMRCs are a cornerstone of action, connecting data-informed strategies improve outcomes and save the lives of moms
Data to make a difference....
Thank you!

For more information, contact:
yzq1@cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.