MURIEL BOWSER
MAYOR

October 7, 2024

The Honorable Phil Mendelson
Chairman, Council of the District of Columbia
John A. Wilson Building
1350 Pennsylvania Avenue, NW, Suite 504
Washington, DC 20004

Dear Chairman Mendelson:

I am hereby transmitting the District of Columbia Maternal Mortality Review Committee 2022 Annual Report, prepared by the Committee pursuant to D.C. Official Code § 7-671.02, to the Council of the District of Columbia.

This report includes case discussions, data, and recommendations developed in 2022 from the review of maternal deaths that occurred in 2018, 2019, and 2020.

If you have any questions regarding the report, please contact Tracie Martin, Director, Program Manager, Fatality Review Division, Office of the Chief Medical Examiner, at 202-698-9024, or by email at tracie.martin@dc.gov.

Sincerely,

Muriel Bowser

Enclosure

DISTRICT OF COLUMBIA MATERNAL MORTALITY REVIEW COMMITTEE

2022 ANNUAL REPORT

GOVERNMENT OF THE DISTRICT OF COLUMBIA
MURIEL BOWSER, MAYOR

MATERNAL MORTALITY REVIEW COMMITTEE 2022 ANNUAL REPORT

Presented To

The Honorable Muriel Bowser, Mayor, District of Columbia

The Council of the District of Columbia

The Residents of the District of Columbia

Maternal Mortality Review Committee 2022 Co-Chairs

Aza Nedhari, CPM, LGPC
Executive Director, Mamatoto Village

Christina X. Marea, PhD, MA, MSN, FACNM
Assistant Professor, School of Nursing, Georgetown University
Midwife, Community of Hope

Office of the Chief Medical Examiner
Fatality Review Division Contributing Staff

Tracie T. Martin, MSW
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Special Contributors

Constance Bohon, MD
American College of Obstetrics and Gynecology

Jamila Perritt, MD, MPH
Physicians for Reproductive Health

CONTENTS

DEDICATION

This Annual Report is dedicated to the memory of those whose lives were lost due to events surrounding their pregnancy.

As we navigate through this process of support and advocacy for birthing people, we hope our work will ultimately improve outcomes for all residents of the District of Columbia.[1]

1 We intentionally use expansive language, including the term birthing people, in relation to gender identity understanding that many people who experience pregnancy and pregnancy complications may not experience gender as binary. Gender specific terms will be used in some places to be consistent with research or data reporting measures.

INTRODUCTION

The District of Columbia's Maternal Mortality Review Committee (MMRC) was established in 2018 by the Maternal Mortality Review Committee Establishment Act of 2018. With administrative support from the Office of the Chief Medical Examiner, the MMRC presents the residents of the District of Columbia with the opportunity to discuss maternal mortality through the retrospective lens of the fatality review process. By identifying the risks associated with the causes of maternal mortalities, the MMRC constructs recommendations with the goal of reducing maternal mortalities in the District of Columbia. The objective of the MMRC is to examine the overall interaction between birthing persons and the medical community.

The MMRC is proud to present its third Annual Report. This report includes case discussions, data, and recommendations developed in 2022 from the review of maternal deaths that occurred in 2018, 2019, and 2020. Through this report, we share the ways our community, health, and social systems might have intervened to prevent maternal mortality, while also protecting the privacy of the decedents and their families. Our aim is to prevent maternal mortality through improved access to health care services, social services, and increase community building to strengthen our complex system of care.

GREETINGS FROM THE CHIEF MEDICAL EXAMINER

"The work of the MMRC is well respected, and we honor their commitment."

As we present the District of Columbia's Maternal Mortality Review Committee's (MMRC) 2022 Annual Report, I want to express my sincere gratitude to the Committee's members. Their task to address disparities and systemic barriers within maternal healthcare is challenging. However, their collective experiences as leaders in community health, medical professionals, advocates, and representatives from District Government agencies, provides the perfect setting for these discussions.

Through the leadership of the co-chairs Aza Nedhari and Christina Marea, PhD, the members continue to meet virtually to review cases and propose recommendations that directly address the needs of those navigating our system of care. In 2022, new members were sworn-in, and the MMRC welcomed meeting participants from the maternal health community, students, and the media. The work of the MMRC is well respected, and we honor their commitment.

We are pleased to present the Maternal Mortality Review Committee's 2022 annual report. We hope this report will help to inform the community and improve the lives of our residents.

Francisco J. Diaz, MD FCAP FASCP
Chief Medical Examiner
Office of the Chief Medical Examiner

GREETINGS FROM THE MMRC CO-CHAIRS

"In honor of those we lost. May their memory live in the hearts of those who knew and loved them".

Aza Nedhari CPM, LGPC Executive Director, Mamatoto Village

Christina Marea, PhD, MA, MSN, CNM Assistant Professor, School of Nursing Georgetown University

It is with deep compassion that we present to you the District of Columbia's Maternal Mortality Review Committee's 2022 Annual Report. This report is a culmination of the collective efforts of the Committee's members and OCME staff who worked tirelessly to review cases in a just and equitable manner. We present recommendations to mitigate health and social inequities, and address systemic barriers within maternal healthcare.

We recognize that maternal health is a critical issue that affects the lives of not only mothers and birthing people but also their families and communities. We hope this report will continue to shed light on the challenges faced by women and birthing people navigating our system of care and provide valuable insights to improve outcomes for all residents in the District of Columbia.

We want to extend our appreciation to the MMRC members and OCME staff for their dedication and commitment to this important work. We also want to thank the broader maternal health community, students, and the media for their support and contributions.

We hope that this report will serve as a valuable resource for all those involved in maternal healthcare and inspire continued efforts toward reducing maternal mortality and making the District of Columbia the safest place to give birth and raise a family.

MATERNAL MORTALITY REVIEW COMMITTEE MEMBERS

The Maternal Mortality Review Committee Establishment Act of 2018 defines the composition of the DC MMRC. The members of the MMRC convene on the 4th Tuesday of each month.

DC Government Members

Shermain Bowden, LICSW
Department of Behavioral Health

Theresa Early, M. Ed.
Department of Human Services

Kristinza Giese, MD
Office of the Chief Medical Examiner

Rebecca Winter
DC Health

Medical Professionals

Donna Anthony, MPH
Children's National Medical Center

Kristin Atkins, MD
Howard University Hospital

Rita Calabro, MD
Sibley Hospital

Christine Colie, MD
Medstar Georgetown University Hospital

Melissa Fries, MD
MedStar Washington Hospital Center

Nancy Gaba, MD
George Washington University

Monique Powell-Davis, MD
Mary's Center

Ebony Marcelle, DNP, CNM, FACNM
Community of Hope

Christina Marea, PhD, MA, MSN, FACNM
Georgetown University
Community of Hope

Iman Newsome
A Doula Member
Serving DC Residents

Maternal Health Advocates

Roberta Bell, RN
March of Dimes

Constance Bohon, MD
American College of Obstetrics and Gynecologu

Cherie Craft
Smart from the Start DC

Janeen Cross, DSW
Howard University
School of Social Work

Aza Nedhari, CPM, LGPC
Mamatoto Village

Jamila Perritt, MD, MPH
Physicians for Reproductive Health

THE WORK OF THE MMRC

MMRC 2022
CASE REVIEWS

In 2022, the MMRC convened in both open and closed sessions, continuing to utilize the WebEx virtual meeting platform. During open meeting sessions, members discussed the purpose of the MMRC with college students, researchers, physicians, and maternal health advocates.

During the closed sessions, members discussed the circumstances surrounding the deaths of four (4) birthing persons that occurred in 2018, 2019, and 2020, all of whom were residents of the District of Columbia. Staff from the Fatality Review Division (FRD) engaged with the following District Government agencies to gather information about the decedents and develop fatality case review summaries.

Hospitals
Decedent medical records are obtained from area hospitals serving pregnant people.

DC Health
The DC Health Vital Records Administration provides decedent death certificates.

Metropolitan Police Department
Police investigation reports are provided for review.

Office of the Chief Medical Examiner
Medical legal investigations and autopsy reports are provided for review.

DC Fire and Emergency Medical Services
FRD staff reviews records from decedent emergency medical records.

District Government Human Services Cluster Agencies
Information on the decedent's participation in public services are provided for review.

PREGNANCY RELATEDNESS

To assist with the maternal mortality case review process, the MMRC utilizes the Center for Disease Control's (CDC) Maternal Mortality Review Information Application (MMRIA) to determine how the deaths were pregnancy related.

The MMRIA form identifies three categories of pregnancy-relatedness:

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
The death of a woman while pregnant or within one year of pregnancy, from a cause that is not related.

The MMRC reviewed four cases in 2022; two (2) accidental deaths, one (1) homicide, and one (1) natural death. The homicide and natural death cases were considered pregnancy related. One accidental death was deemed pregnancy associated but not related. The remaining accidental case was not categorized as there was not enough information in records to provide a finding. These cases consisted of birthing persons under the age of 35. Three (3) decedents were Black, and one (1) was Hispanic. The MMRC agreed these maternal deaths were preventable.

According to both public and medical records reviewed by FRD staff, all of these decedents were single parents with supportive family members. Members learned how maternal deaths can occur following a series of unimpeded medical issues and contributing social factors.

As observed during case review meetings, the postpartum phase is a time when birthing persons experience physical, mental, and social transitions including increased barriers to caring for themselves while also caring for their families.

Each maternal death occurred postpartum, with one maternal death occurring within 7 to 42 days postpartum, and the remaining three occurring within 43 to 65 days postpartum. As reported by the CDC, fifty-three percent (53%) of maternal mortalities occurred within 7 to 365 days postpartum. As pregnancy associated medical complications can extend beyond the pregnancy, the MMRC[2] members agreed that Medicaid eligible birthing persons should maintain coverage 12 months following the pregnancy. With the implementation of the Postpartum Coverage Expansion Amendment Act of 2020 (DC Law 23-132), all health policies offered through the District's Medicaid program cover inpatient and outpatient maternity and newborn care for at least one year after childbirth.

2022
DECEDENT CAUSES OF DEATH

The following causes of death were identified during the MMRC case review meetings:

Pre-eclampsia: Pre-eclampsia is a multisystem disorder characterized by high blood pressure experienced during pregnancy or postpartum. This condition may include fluid retention and protein in the urine (proteinuria). This form of hypertension is common in the United States, occurring within one in every twenty-five pregnancies. Preeclampsia was further complicated by multiple chronic comorbidities.

Gunshot Wound of the Head: Through the fatality review process, the MMRC observed how pregnancy-related homicides are increasing. This case was reviewed by the MMRC in collaboration with the DC Violence Fatality Review Committee to address intimate partner violence and services available to birthing persons in the District of Columbia.

Multiple Blunt Force Trauma: Multiple blunt force trauma was the cause of death following a high-speed motor vehicle accident. According to the Birth Injury Help Center, nearly 200,000 pregnant women are involved in motor vehicle accidents yearly.[3]

Acute Ethanol Intoxication: Acute ethanol intoxication is a serious result of drinking large amounts of alcohol in a short period of time. Drinking too much, too quickly can affect breathing, heart rate, body temperature and gag reflex. In some cases, this can lead to a coma and death.

2 cdc.gov/reproductivehealth/maternal-mortality/erase-mm/data-mmrc.html
3 birthinjuryhelpcenter.org

MATERNAL DEATH CONTRIBUTING FACTORS

The maternal mortality review process includes a discussion of the birthing person's lifespan, as their social and environmental history is often provided through the review of medical and government records. Through its collaboration with the CDC, the DC MMRC utilizes the MMRIA form during its review of cases to discuss and document these contributing factors – all issues that can adversely affect the outcome of pregnancies.

The CDC's MMRIA form provides descriptions of those contributing factors that present as barriers to the birthing person's overall health. The following contributing factors were identified during the MMRC's case reviews in 2022:

Discrimination: Treating someone less or more favorably based on the group, class, or category they belong to, resulting in biases, prejudices, and stereotyping. It can manifest as differences in care, clinical communication, and shared decision-making.

Violence and Intimate Partner Violence: Physical or emotional abuse perpetrated by a current or former intimate partner, family member, friend, acquaintance, or stranger.

Trauma: The individual experienced trauma including loss of child (death or loss of custody), 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, or other physical or emotional abuse other than that related to sexual abuse during childhood.

MATERNAL DEATH CONTRIBUTING FACTORS

Lack of Financial Resources: Financial stressors, as opposed to noncompliance, impacted the birthing person's ability to care for themself. Some barriers to accessing care include the following: insurance non-eligibility, provider shortage in their geographical area, and lack of public transportation.

Failure to Screen/Inadequate Assessment of Risks: Factors placing the individual at risk for a poor clinical outcome was recognized, however the individual was not transferred or transported to a provider able to give a higher level of care.

Chronic Disease: The occurrence of one or more significant pre-existing medical conditions.

Clinical Skill/Quality of Care: Personnel were not appropriately skilled for the situation or did not exercise clinical judgment consistent with the standards of care assessment at discharge.

Poor Communication/Lack of Case Coordination: Care was fragmented among or between healthcare facilities or units.

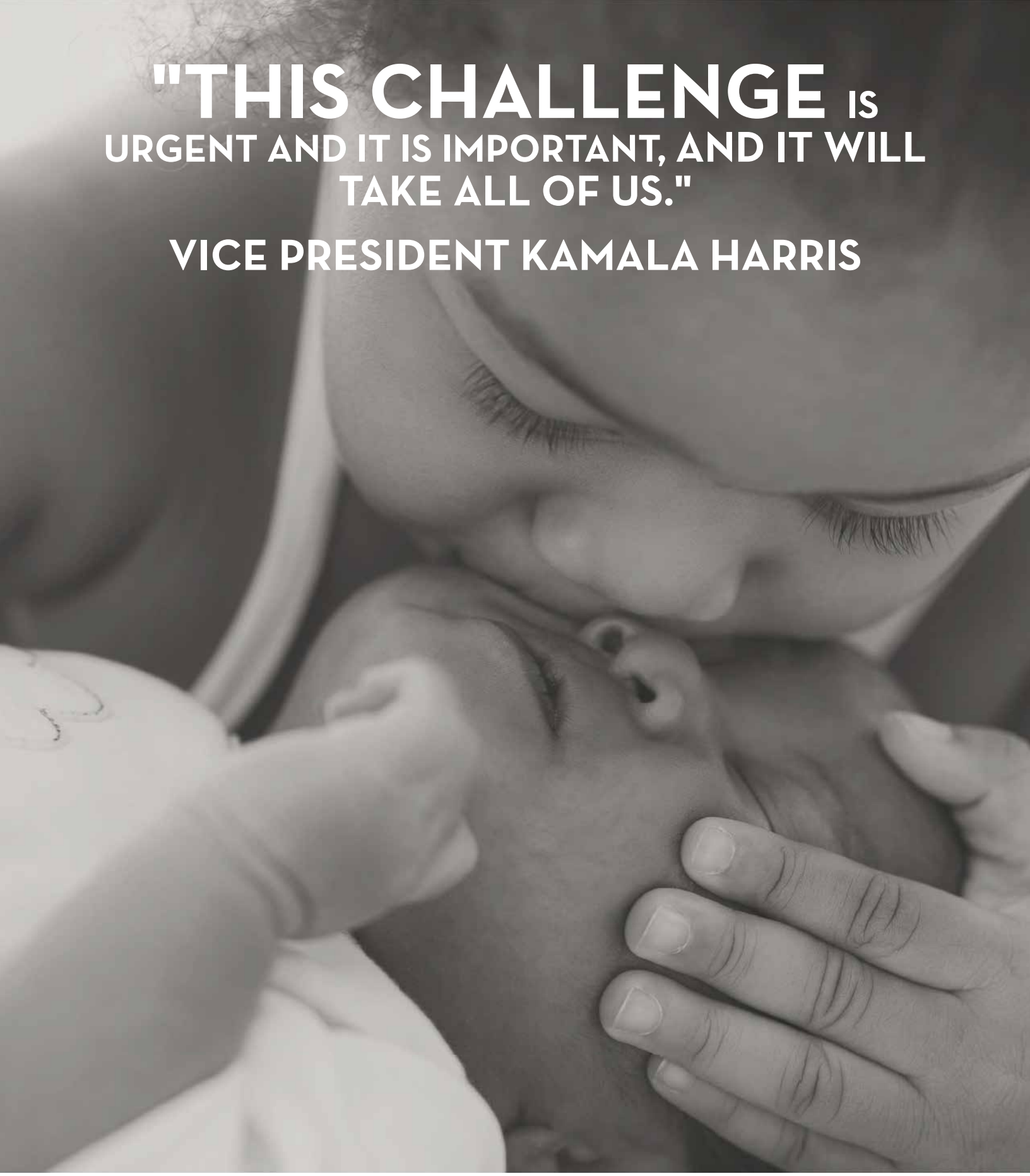
Environmental Factors: Factors related to weather or social environment.

Mental Health Condition: The patient had a documented diagnosis of a psychiatric disorder. This includes postpartum depression.

Lack of Standardized Policies and Procedures: The facility lacked basic policies or infrastructure germane to the individual's needs.

Lack of Referral or Consultation: Medical specialists were not consulted or did not provide care. Referrals to medical 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, and criminal justice.


"THIS CHALLENGE IS
URGENT AND IT IS IMPORTANT, AND IT WILL
TAKE ALL OF US."
VICE PRESIDENT KAMALA HARRIS

MATERNAL MORTALITY REVIEW COMMITTEE
RECOMMENDATIONS

The MMRC adopted recommendations for District of Columbia Government agencies and community-based partners that address the need to improve systems and/or programs that will initiate positive health outcomes for birthing people and their families. These recommendations were initially formulated by members at the closure of the case review and formally adopted by the MMRC Recommendations Subcommittee. The MMRC Recommendations Subcommittee addresses each aspect of the recommendation, which includes the following: (1) the statement of need, (2) the beneficiary population, and (3) how the implementation of the recommendation may impact the overall policies, practice, legal, and budget of the receiving agency/community partner.[4]

The recommendations listed below address the behavioral health needs of persons experiencing perinatal loss, funding sources for community-based behavioral health and specialized services, discharge planning for birthing persons, and advocacy of the MMRC.

Recommendation #1

Department of Healthcare Finance, DC Health, and the Department of Behavioral Health

The Perinatal Mental Health Taskforce should establish perinatal bereavement care guidelines to facilitate quality and effective care coordination and culturally resonant behavioral health services through community support groups or perinatal mental health providers for persons experiencing a perinatal loss (fetal, maternal/ birthing person).

4 The final responses to the adopted recommendations will be published separately.

MATERNAL MORTALITY REVIEW COMMITTEE

RECOMMENDATIONS

Recommendation #2-3
Department of Healthcare Finance

Recommendation #2

The Department of Health Care Finance should provide grants and reimbursement for community-based care coordination and culturally resonant behavioral health services for persons experiencing a perinatal loss (fetal, maternal/birthing person and other affected family and community members).

Recommendations #3

Pregnancy and 12-month post-partum care should include adequate compensation and reimbursement for all medical, behavioral, and social services that the client requires. This would include but is not limited to, compensation for community health workers, doulas, care coordination, behavioral health, and triage nurses to achieve optimal outcomes.

Recommendations #4-6
DC Health and the DC Hospital Association

Recommendation #4

Obstetric units in DC hospitals must have a protocol for documenting patient phone calls that includes documentation of calls, action taken, and follow-up plan. Contact information for both clinics and hospital-based triage numbers should be included in all discharge instructions for both antepartum and postpartum clients. Discharge instructions must be diagnosis specific and comprehensive. Contact numbers should be reviewed regularly as numbers frequently change.

Recommendation #5

Existing programs for post-hospital home care should be expanded to include medically and socially complex postpartum patients with the establishment of contact prior to discharge.

MATERNAL MORTALITY REVIEW COMMITTEE

RECOMMENDATIONS

Recommendation #6

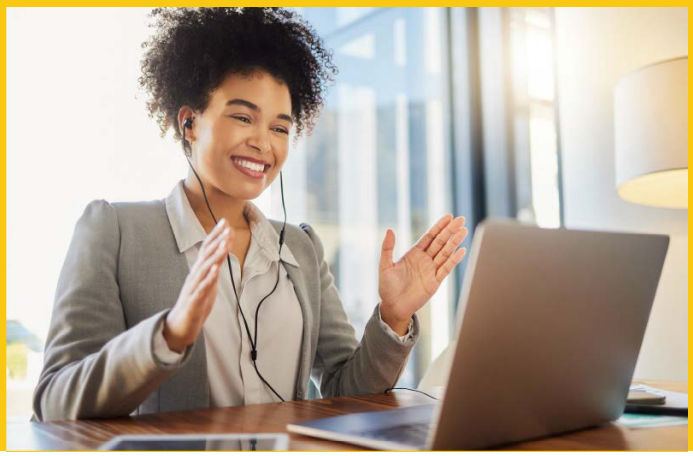
At the time of discharge consideration, there should be documentation of the postpartum patient's ability to self-care. This includes the ability to self-medicate, void, consume food, and adequately ambulate and provide infant care. If the postpartum patient cannot sufficiently care for themselves, discharge should be delayed until the postpartum patient or an appropriately trained care professional can care for the mother and infant.

RECOMMENDATION FOR MMRC MEMBER'S ADVOCACY

Members agreed their advocacy for systemic improvements in maternal health required the involvement and collaboration among maternal mortality committees in adjacent jurisdictions. The following recommendation was developed to address this need:

Recommendation #7

Death certificates and death findings should be shared across jurisdictions among Maternal Mortality Review Committees. At the joint committee meeting of the Centers of Disease Control and the American College of Obstetrics and Gynecologist, the attending representatives of the MMRC will discuss the need for federal policy changes that should require sharing of the maternal mortality death certificates and findings across jurisdictions.



ACKNOWLEDGEMENT

"The OCME Fatality Review Division whole-heartedly acknowledges and appreciates the members and the participants of the MMRC meetings. Through your volunteerism and advocacy, we know we can make a decrease in the instances of maternal mortality."

APPENDICES

APPENDIX A

REVIEW DATE

Month/Day/Year

RECORD ID #

COMMITTEE DETERMINATION OF CAUSE(S) OF DEATH

IF PREGNANCY-RELATED, COMMITTEE DETERMINATION OF UNDERLYING* CAUSE OF DEATH
Refer to page 3 for PMSS-MM cause of death list.

TYPE	OPTIONAL: CAUSE (DESCRIPTIVE)
UNDERLYING*	
CONTRIBUTING	
IMMEDIATE	
OTHER SIGNIFICANT	

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

ESTIMATE THE DEGREE OF RELEVANT INFORMATION (RECORDS) AVAILABLE FOR THIS CASE:

- ☐ COMPLETE
  All records necessary for adequate review of the case were available
- ☐ MOSTLY COMPLETE
  Minor gaps (i.e, information that would have been beneficial but was not essential to the review of the case)
- ☐ SOMEWHAT COMPLETE
  Major gaps (i.e, information that would have been crucial to the review of the case)
- ☐ NOT COMPLETE
  Minimal records available for review (i.e, death certificate and no additional records)

DOES THE COMMITTEE AGREE WITH THE UNDERLYING* CAUSE OF DEATH LISTED ON DEATH CERTIFICATE? ☐ YES ☐ NO

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, HOMICIDE, OR SUICIDE, LIST THE **MEANS OF FATAL INJURY**

- ☐ FIREARM
- ☐ SHARP INSTRUMENT
- ☐ BLUNT INSTRUMENT
- ☐ POISONING/ OVERDOSE
- ☐ HANGING/ STRANGULATION/ SUFFOCATION
- ☐ FALL
- ☐ PUNCHING/ KICKING/BEATING
- ☐ EXPLOSIVE
- ☐ DROWNING
- ☐ FIRE OR BURNS
- ☐ MOTOR VEHICLE
- ☐ INTENTIONAL NEGLECT
- ☐ OTHER, SPECIFY:
- ☐ UNKNOWN
- ☐ NOT APPLICABLE

IF HOMICIDE, WHAT WAS THE **RELATIONSHIP OF THE PERPETRATOR TO THE DECEDENT?**

- ☐ NO RELATIONSHIP
- ☐ PARTNER
- ☐ EX-PARTNER
- ☐ OTHER RELATIVE
- ☐ OTHER
- ☐ ACQUAINTANCE
- ☐ OTHER, SPECIFY:
- ☐ UNKNOWN
- ☐ NOT APPLICABLE

*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.

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.

RECOMMENDATIONS OF THE COMMITTEE

If there was at least some chance that the death could have been averted, what were the specific and feasible actions that, if implemented or altered, might have changed the course of events?

DESCRIPTION OF ISSUE (enter a description for EACH contributing factor listed)	CONTRIBUTING FACTORS (choose as many as needed below)	LEVEL	COMMITTEE RECOMMENDATIONS [Who?] should [do what?] [when?] Map recommendations to contributing factors.	LEVEL	PREVENTION TYPE (choose below)	EXPECTED IMPACT (choose below)
This was relative to the decedent's challenges in family of origin, unstable housing and housing insecurity			f			
Current typical practice where PP 6-12 weeks, should be standard assessment with complex medical roughly 6 months PP						
failure to screen/inadequate assessment of risk						

CONTRIBUTING FACTOR KEY (DESCRIPTIONS ON PAGE 4)

- 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

DEFINITION 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 (i.e, treatment)
- **TERTIARY:** Reduces the impact or progression of what has become an ongoing contributing factor (i.e, management of complications)

EXPECTED IMPACT

- **SMALL:** Education/counseling (community- and/or provider-based health promotion and education 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 drivers of health (poverty, inequality, etc.)

IF PREGNANCY-RELATED, COMMITTEE DETERMINATION OF UNDERLYING CAUSE OF DEATH* PMSS-MM

* PREGNANCY-RELATED DEATH: 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.

Hemorrhage (Excludes Aneurysms or CVA)
10.1 - Hemorrhage – Uterine Rupture
10.2 - Placental Abruption
10.3 - Placenta Previa
10.4 - Ruptured Ectopic Pregnancy
10.5 - Hemorrhage – Uterine Atony/Postpartum Hemorrhage
10.6 - Placenta Accreta/Increta/Percreta
10.7 - Hemorrhage due to Retained Placenta
10.10 - Hemorrhage – Laceration/Intra-Abdominal Bleeding
10.9 - Other Hemorrhage/NOS

Infection
20.1 - Postpartum Genital Tract (e.g,, of the Uterus/Pelvis/Perineum/Necrotizing Fasciitis)
20.2 - Sepsis/Septic Shock
20.4 - Chorioamnionitis/Antepartum Infection
20.6 - Urinary Tract Infection
20.7 - Influenza
20.8 - COVID-19
20.10 - Pneumonia
20.11 - Other Non-Pelvic Infection (e.g,, TB, Meningitis, HIV)
20.9 - Other Infection/NOS

Embolism - Thrombotic (Non-Cerebral)
30.1 - Embolism – Thrombotic (Non-Cerebral)
30.9 - Other Embolism (Excludes Amniotic Fluid Embolism)/NOS

Amniotic Fluid Embolism
31.1 - Embolism - Amniotic Fluid

Hypertensive Disorders of Pregnancy (HDP)
40.1 - Preeclampsia
50.1 - Eclampsia
60.1 - Chronic Hypertension with Superimposed Preeclampsia

Anesthesia Complications
70.1 - Anesthesia Complications

Cardiomyopathy
80.1 - Postpartum/Peripartum Cardiomyopathy
80.2 - Hypertrophic Cardiomyopathy
80.9 - Other Cardiomyopathy/NOS

Hematologic
82.1 - Sickle Cell Anemia
82.9 - Other Hematologic Conditions including Thrombophilias/TTP/HUS/NOS

Collagen Vascular/Autoimmune Diseases
83.1 - Systemic Lupus Erythematosus (SLE)
83.9 - Other Collagen Vascular Diseases/NOS

Conditions Unique to Pregnancy
85.1 - Conditions Unique to Pregnancy (e.g, Gestational Diabetes, Hyperemesis, Liver Disease of Pregnancy)

Injury
88.1 - Intentional (Homicide)
88.2 - Unintentional
88.9 - Unknown Intent/NOS

Cancer
89.1 - Gestational Trophoblastic Disease (GTD)
89.3 - Malignant Melanoma
89.9 - Other Malignancies/NOS

Cardiovascular Conditions (excluding cardiomyopathy, HDP, and CVA)
90.1 - Coronary Artery Disease/Myocardial Infarction (MI)/Atherosclerotic Cardiovascular Disease
90.2 - Pulmonary Hypertension
90.3 - Valvular Heart Disease Congenital and Acquired
90.4 - Vascular Aneurysm/Dissection (Non-Cerebral)
90.5 - Hypertensive Cardiovascular Disease
90.6 - Marfan Syndrome
90.7 - Conduction Defects/Arrhythmias
90.8 - Vascular Malformations Outside Head and Coronary Arteries
90.9 - Other Cardiovascular Disease, including CHF, Cardiomegaly, Cardiac Hypertrophy, Cardiac Fibrosis, Non-Acute Myocarditis/NOS

Pulmonary Conditions (Excludes ARDS-Adult Respiratory Distress Syndrome)
91.1 - Chronic Lung Disease
91.2 - Cystic Fibrosis
91.3 - Asthma
91.9 - Other Pulmonary Disease/NOS

Neurologic/Neurovascular Conditions (Excluding CVA)
92.1 - Epilepsy/Seizure Disorder
92.9 - Other Neurologic Diseases/NOS

Renal Disease
93.1 - Chronic Renal Failure/End-Stage Renal Disease (ESRD)
93.9 - Other Renal Disease/NOS

Cerebrovascular Accident (CVA) not Secondary to HDP
95.1 - Cerebrovascular Accident (Hemorrhage/Thrombosis/Aneurysm/Malformation) not Secondary to Hypertensive Disorders of Pregnancy

Metabolic/Endocrine
96.2 - Diabetes Mellitus
96.9 - Other Metabolic/Endocrine Disorders/NOS

Gastrointestinal Disorders
97.1 - Crohn's Disease/Ulcerative Colitis
97.2 - Liver Disease/Failure/Transplant
97.9 - Other Gastrointestinal Diseases/NOS

Mental Health Conditions
100.1 - Depressie Disorder
100.2 - Anxiety Disorder (including Post-Traumatic Stress Disorder)
100.3 - Bipolar Disorder
100.4 - Psychotic Disorder
100.5 - Substance Use Disorder
100.9 - Other Psychiatric Conditions/NOS

Unknown COD
999.1 - Unknown COD

CONTRIBUTING FACTOR DESCRIPTIONS

LACK OF **ACCESS/FINANCIAL** RESOURCES
Systemic barriers, e.g, lack or loss of healthcare insurance or other financial duress, as opposed to noncompliance, impacted their ability to care for themself (e.g, did not seek services because unable to miss work or afford postpartum visits after insurance expired). Other barriers to accessing care: insurance non-eligibility, provider shortage in their 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 individual at risk for a poor clinical outcome recognized, and they were not transferred/transported to a provider able to give a higher level of care.

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)
Personnel were not appropriately skilled for the situation or did not exercise clinical judgment consistent with standards of care (e.g, error in the preparation or administration of medication or unavailability of translation services).

POOR **COMMUNICATION**/LACK OF CASE 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 available between inpatient and outpatient or among units 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 individual's complete records or did not communicate their status sufficiently. Lack of continuity can be between prenatal, labor and delivery, and postpartum providers.

CULTURAL/RELIGIOUS, OR LANGUAGE FACTORS The provider
or patient 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/action.

DISCRIMINATION
Treating someone less or more favorably based on the group, class or category they belong to resulting from biases, prejudices, and stereotyping. It can manifest as differences in care, clinical communication and shared decision-making. (Smedley 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
Discriminatory interactions 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, suspicion, devaluation, scapegoating, and dehumanization. (Jones, CP, 2000 and Dr. Cornelia Graves).

KNOWLEDGE - LACK OF KNOWLEDGE REGARDING IMPORTANCE OF EVENT OR OF TREATMENT OR FOLLOW-UP
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 ED visit for exacerbation of depression).

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

LEGAL
Legal considerations that impacted outcome.

MENTAL HEALTH CONDITIONS
The patient had a documented diagnosis of a psychiatric disorder. This includes postpartum depression. If a formal diagnosis is not available, refer to your review committee subject matter experts (e.g, psychiatrist, psychologist, licensed counselor) to determine whether the criteria for a diagnosis of substance use disorder or another mental health condition are met based on the available information.

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 infrastructure germane to the individual'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.

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

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 ZD. Lancet. 2017 and Dr. Carla Ortique)

SUBSTANCE USE DISORDER – ALCOHOL, ILLICIT/ 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 their health status (e.g, acute methamphetamine intoxication exacerbated pregnancy- induced hypertension, or they 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).

TRAUMA
The individual experienced trauma: i.e,, loss of child (death or loss of custody), 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; or other physical or emotional abuse other than that related to sexual abuse during childhood.

UNSTABLE HOUSING
Individual 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, friend, acquaintance, or stranger.

OTHER
Contributing factor not otherwise mentioned. Please provide description.

CONTRIBUTING FACTORS AND RECOMMENDATIONS FOR ACTION (Continued from page 2)

CONTRIBUTING FACTORS WORKSHEET

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

RECOMMENDATIONS OF THE COMMITTEE

If there was at least some chance that the death could have been averted, what were the specific and feasible actions that, if implemented or altered, might have changed the course of events?

DESCRIPTION OF ISSUE (enter a description for EACH contributing factor listed)	**CONTRIBUTING FACTORS** (choose as many as needed below)	**LEVEL**	**COMMITTEE RECOMMENDATIONS** [Who?] should [do what?] [when?] Map recommendations to contributing factors.	**LEVEL**	**PREVENTION TYPE** (choose below)	**EXPECTED IMPACT** (choose below)

CONTRIBUTING FACTORS AND RECOMMENDATIONS FOR ACTION (Continued from page 5)

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

RECOMMENDATIONS OF THE COMMITTEE
If there was at least some chance that the death could have been averted, what were the specific and feasible actions that, if implemented or altered, might have changed the course of events?

DESCRIPTION OF ISSUE (enter a description for EACH contributing factor listed)	**CONTRIBUTING FACTORS** (choose as many as needed below)	**LEVEL**	**COMMITTEE RECOMMENDATIONS** [Who?] should [do what?] [when?] Map recommendations to contributing factors.	**LEVEL**	**PREVENTION TYPE** (choose below)	**EXPECTED IMPACT** (choose below)
	Other					

GLOSSARY

Accidental Death: There is little to no evidence that the injury or poisoning occurred with intent to harm or cause death. The fatal outcome is unintentional.

Discrimination: Treating someone less favorably based on the group, class, or category they belong to resulting from biases, prejudices, and stereotyping. It can manifest as differences in care, clinical communication, and shared decision-making.

Homicide: The death results from an injury or poisoning or from a volitional act committed by another person to cause fear, harm, or death. Intent to cause death is a common element but not a requirement for classification as a homicide.

Hypertensive Cardiovascular Disease: Hypertensive disorders of pregnancy place the birthing person at risk of preeclampsia/eclampsia, and the fetus at risk of preterm birth, placental abruption (the placenta separates from the wall of the uterus before birth), and cesarean birth.

Maternal Mortality Review Information Application (MMRIA): A data system developed by the CDC available to all MMRCs to support review functions. The form consists of a collection of clinical and non-clinical information surrounding the birthing person's life and death. This form assists MMRCs in determining the following: (1) if the death was related to pregnancy, (2) if the death could have been prevented, and (3) if the factors identified in the MMRIA form contributed to the death. This form allows committees to determine recommendations to prevent future deaths. The MMRIA form can be accessed at: cdc.gov/reproductivehealth/maternal-mortality/erase-mm/MMRIA.html

Natural Death: According to the CDC, it is defined as deaths due solely or nearly totally to disease and/or the aging process.

Pre-eclampsia: Pregnancy disorder characterized by high blood pressure, sometimes with fluid retention and protein in the urine.

Eclampsia: Eclampsia is the new onset of seizures or coma in a pregnant woman with preeclampsia. The seizures are not related to an exisitng brain condition.

Structural Racism: Systemic and structural racism are forms of racism that are pervasively and deeply embedded in systems, laws, written or unwritten policies, and entrenched practices and beliefs that produce, condone, and perpetuate widespread unfair treatment and oppression of people of color, with adverse health consequences.

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