



Call to Action: Establishing a System-Level Maternal Mortality Review

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UPMC | MAGEE-WOMENS

Problem

- Healthcare teams can & should do better to help eliminate health disparities
- Long term solutions include dismantling systemic racism within hospital organizations, addressing social determinants of health, addressing implicit bias, & identifying current & historic inequalities
- The 2013-2018 PA state database related to maternal mortality reports, that while Blacks made up 14% of births, they made up 23% of deaths during that same timeframe

Background

- Maternal Mortality Review Committees (MMRC) are one mechanism to investigate, acknowledge, & make recommendations to prevent deaths by assessing contributing factors, determining preventability, & examining root causes
- Governor Wolf signed Act 24 of 2018 establishing PA MMRC
- PA Perinatal Quality Collaborative (PAPQC) is the action arm of the PA MMRC and recommended performing multi-disciplinary system-level reviews on all cases of maternal mortality
- A system MMRC was established in 2020 across all 15 birthing hospitals (a health system that delivers 25,000 babies annually) in order to:
 - Better understand maternal morbidity & mortality in birthing people of color, racially / ethnically diverse populations, & vulnerable communities receiving care in the health system
 - Complete internal reviews & identify opportunities & solutions to improve maternity care

Implications of a System MMRC

- Benefits front line nurses & nursing leaders caring for birthing persons, as examining day-to-day practices & understanding contributing factors can improve safety for pregnant people
- Develops strategies to improve the quality of care in order to reduce preventable morbidity, mortality, & racial disparities related to pregnancy
- Standardizes policies / checklists & enhance patient education to reduce patient harm, decrease variation in care, & improve team communication
- Acknowledges the need for consistent, periodic training in relation to the recognition & mitigation of bias & discrimination in maternity care
- Enhances patient trust & community partnerships

UPMC Lessons Learned & Actions Taken

- Accidental poisonings (overdoses) identified as a leading cause of maternal death**
 - Formation of Perinatal Substance Use Disorder (SUD) Committee across UPMC to improve care for birthing people & infants
 - Bias/stigma staff education
 - Universal substance screening with validated tools & offering medication for opioid use disorder
 - Providing Narcan at discharge
 - Plans of Safe Care initiated prior to discharge
 - Achieved system-wide Gold Cribs for Kids Safe Sleep designation as unsafe sleep deaths highest in SUD population
 - Nurse Navigator to provide support, improve communication, & refer to community resources
 - Standardized discharge education
- Racial inequities, implicit bias, & black maternal mortality**
 - Developed clinically-integrated Birth Doula program
 - PA PQC Moving on Maternal Depression Project led to creation of: UPMC Health Equity Now Committee
 - Created as a voice for change to examine outcome data by race & ethnicity, day-to-day processes on L&D units, & advocating for legislative policy – including expansion of Medicaid up to 1 year postpartum
 - Black Maternal Health & Black Breastfeeding Week Celebrations
 - Birthing while Black community education series
 - Implicit bias, anti-racism Upstander training for birth workers
 - Standardized Depression screening (PHQ9) & social detriments of health (SDOH) assessment with referral
 - System education via Grand Rounds, Perinatal conferences on racial disparities, maternal morbidity, amniotic fluid embolism, & SUD
 - Established policies following national guidelines for hemorrhage & hypertension including routine simulation training
 - Recommended 2-week video visit before 6-week postpartum in-person visit
 - Mandating a warning sign video for patients to view before discharge that describes when to seek help (similar to shaken baby & safe sleep videos)
- Visual alerts**
 - AWHONN POST-BIRTH Warning Signs Magnet & CDC Urgent Warning Signs provided at discharge
 - Medical record is flagged for 6 weeks for postpartum patients presenting to the Emergency Department (ED)
 - Patients encouraged to wear "I Delivered" Purple bracelet for up to 1 year after birth to serve as a notification to care teams of recent pregnancy

UPMC MMRC

- Committee Structure: Mirrored PA MMRC committee participants & process using the CDC MMRIA (Maternal Mortality Review Information Application) form
- Case Selection: Any known death of a birth person who delivered a baby or received care at a UPMC facility from any cause while pregnant or within one year of pregnancy termination regardless of site or duration of pregnancy, or death aggravated by the pregnancy or its management (CDC definition)
- Goal: Develop strategies to improve patient safety for childbearing people & reduce preventable morbidity, mortality, & racial disparities related to pregnancy across the health system & communities
- Disseminate: Findings & recommendations are shared with leadership for assistance in addressing / prioritizing the identified opportunities

MMRC Review Process

- Scheduled quarterly
- Event timelines & MMRIA form shared in advance
 - Remote meetings due to COVID & travel
- Begin with moment of silence to acknowledge loss of life
- Remind team if information is upsetting, please step away
 - Encourage use of available support resources
- Brief synopsis of event presented
- Nonpunitive open discussion sharing input & expertise
 - Identify opportunities for improvement on patient, provider, system, hospital, & community levels
 - Group consensus: Whether the death was related to pregnancy, if the death could have been prevented, factors that contributed to the death, & recommendations to prevent future death

Multidisciplinary Committee

- PA MMRC Members - Co-chair, Women's Health Psychiatrist, Emergency Medicine
- System representation - 5 obstetric nurses, 3 obstetricians, & 1 CNM
- Patient Safety & Crisis Intervention Officer
- Social Work & Legal
- Perinatal Safety Nurse
- Director Autopsy & Forensic Pathology
- Epidemiologist / Statistician
- Health Plan
- Perinatal Psychiatrist
- Maternal Fetal Medicine & Critical Care Medicine
- OB Addiction Medicine Specialist
- OB Anesthesia
- Community Outreach
- Additional specialists added as needed

SAVE YOUR LIFE: Get Care for These POST-BIRTH Warning Signs

Learn these POST-BIRTH warning signs—knowing what to do can save your life!

Call 911
if you have:

- Pain in chest
- Obstructed breathing or shortness of breath
- Seizures
- Thoughts of hurting yourself or someone else

POST-BIRTH WARNING SIGNS

Call your healthcare provider
if you have:
(If you can't reach your provider, go to urgent care, an emergency room, or call 911)

- Bleeding, soaking through one pad/hour, or blood clots, the size of an egg or bigger
- Incision that is not healing
- Red or swollen leg, that is painful or warm to touch
- Temperature of 100.4°F or higher
- Headache that does not get better, even after taking medicine, or bad headache with vision changes

Tell 911 or your healthcare provider: "I gave birth on [date] and I am having [specific warning signs]."

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Barriers/Challenges

- Evolving recognition that inequities & bias exist
- Limited effective screening for & access to mental health resources
- Difference in accessibility between urban & rural (maternity care deserts)
- Need for more efficient care coordination across county & state lines (including care coordination in the ED)
- Inconsistent obstetric education & availability of resources in EDs located in facilities with or without birthing services
- Declining COVID vaccination rates / patient mistrust
- Lack of recognition of the importance of listening to patients
- Different levels of understanding among providers & nurses regarding the maternal morbidity & mortality crisis as it relates to racial disparities & inequities
- Autopsies not consistently performed

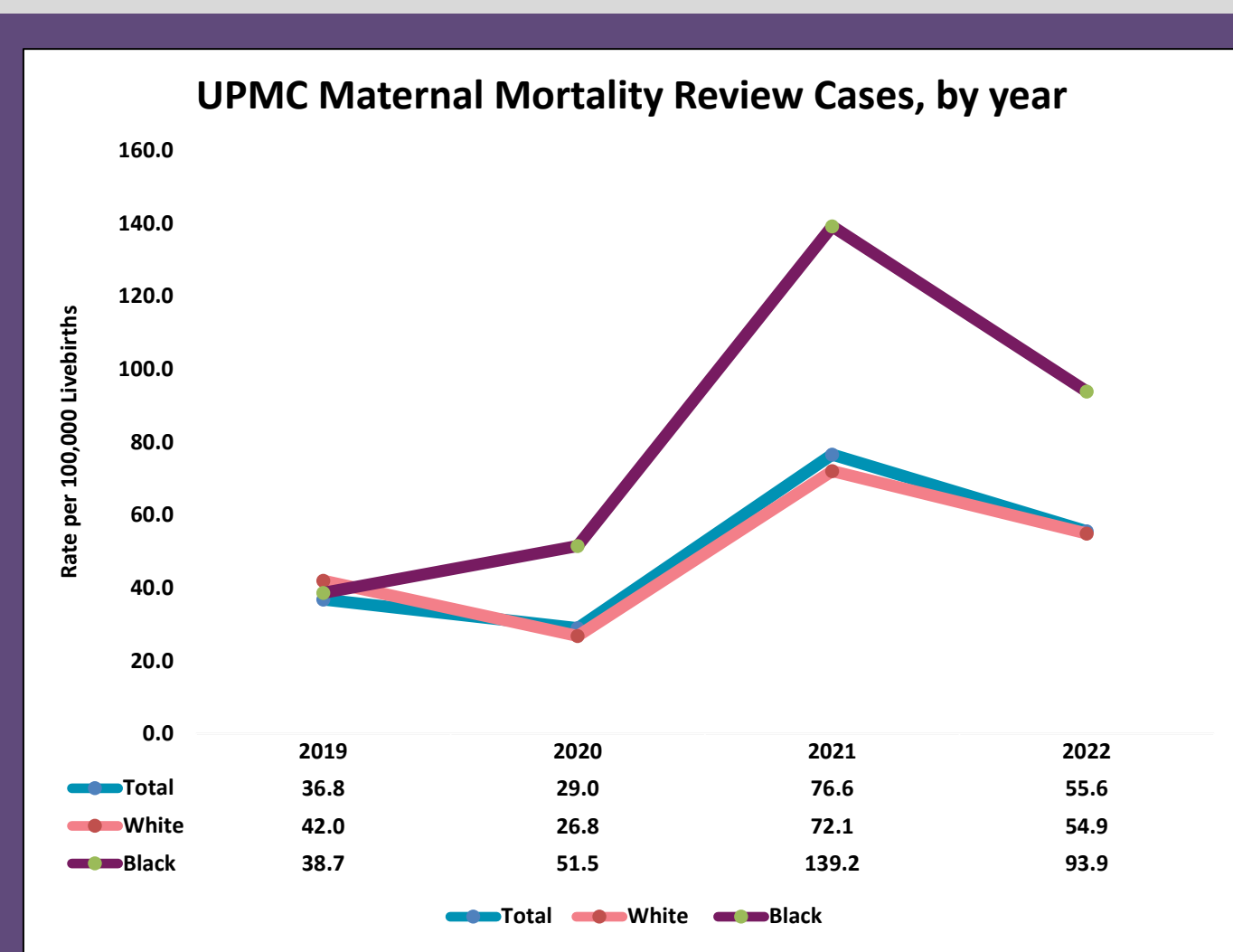
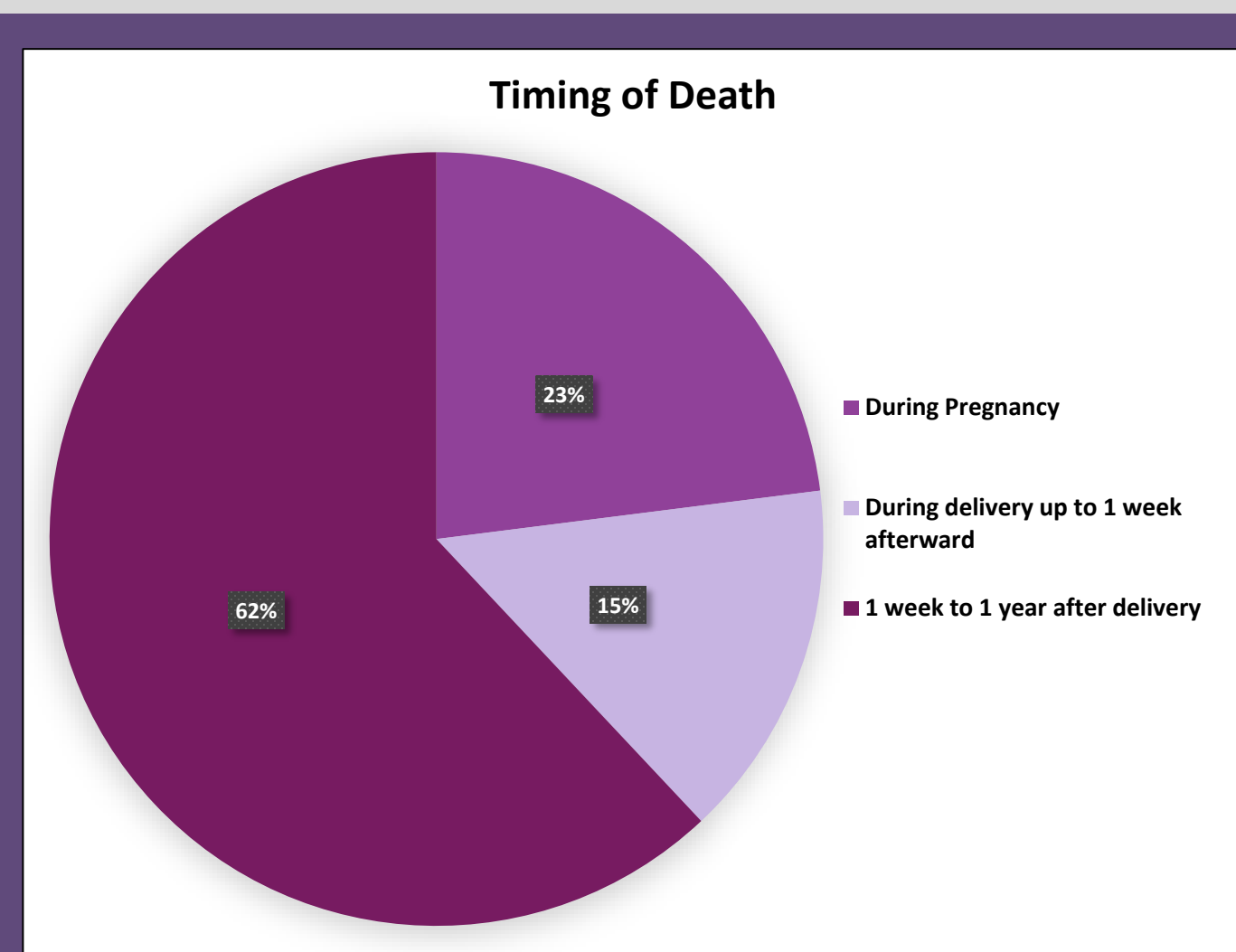
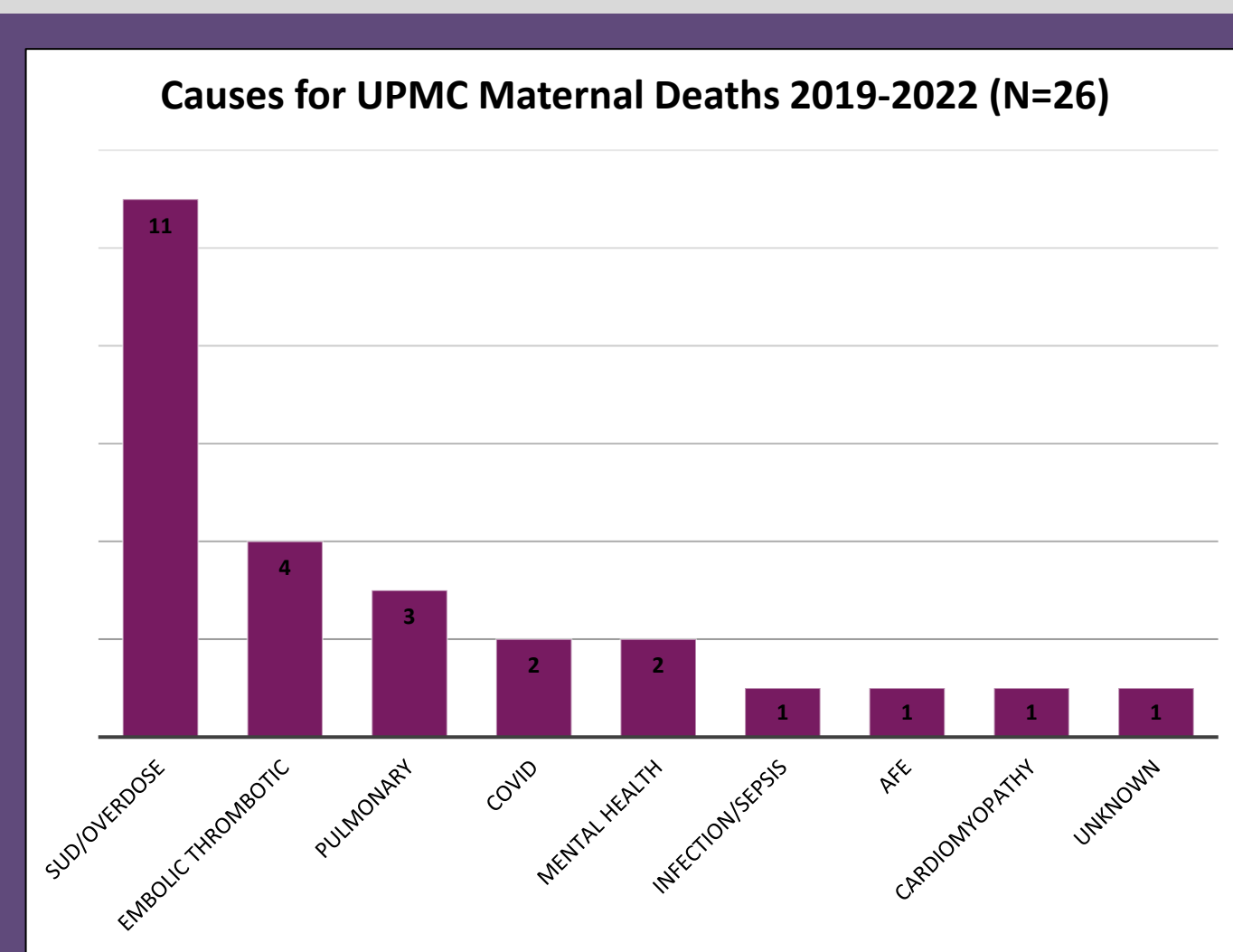
Future Goals

- Develop solutions to enhance provider & patient relationships
 - Center & listen to patients
 - Maintain eye contact
 - Avoid blaming the patient
- Diversify the perinatal workforce
- Dismantle systemic racism; address inequities, social detriments of health, & implicit bias
- Improve care coordination across county & state lines specifically for mental health services, SUD, & ED care
- Advocate for performance of formal autopsy to aid in identification of cause of death, as the accuracy of cause of death data / trends guides future action plans & impacts national statistics
- Continue to implement PA PQC's initiatives across UPMC PA birthing hospitals

Conclusions

- Profound disparities in maternal mortality are observed when the race of the birthing person is considered
- Internal maternal mortality reviews are an essential tool in detecting inequities & population-related concerns in care delivery
- Internal reviews can lead to timely improvements in care when the root causes have been identified
- Accidental poisonings (overdoses) were identified as a leading cause of maternal death within UPMC & PA MMRC
- Not all MMRCs consider overdoses / SUD to be pregnancy-related, & the CDC categorizes these deaths under mental health
- UPMC MMRC elected to separate overdoses / SUD & mental health, as the action plan would be different
- Healthcare encounters during pregnancy span a finite interval, making the identification and mitigation of the many risk factors contributing to maternal mortality a significant challenge

UPMC Magee-Womens is the service line branding that offers trusted regional women's health care in Pennsylvania, New York, & Maryland. The service line has 15 hospitals that offer birthing services ranging from critical access & Level I in very rural communities to near-by regional hubs (UPMC Hamot, Williamsport, & Harrisburg) which are all connected to Quaternary specialized care at UPMC Magee-Womens Hospital in Pittsburgh.



- 26 deaths 2019 to 2022; MMR 50.6 per 100,000 livebirths overall
- 27% Black; 73% White
- MMR: 50.5 per 100,000 livebirths for White individuals; 79.5 per 100,000 livebirths for Black individuals
- Pregnancy Related: 25 (96%); 1 (4%) unable to determine
- Preventable: 23 (88%); not preventable: 1 (4%); undetermined: 2 (8%)
- There was a significant increase in maternal deaths during the COVID pandemic (2020-2022), with significant racial disparities increasing during this time (maternal mortality 1.9-fold higher in Black compared to White individuals). The cause of this increase is under review. There was some indication that rates may be improving in 2022, but this should be monitored carefully.

Summary



PREGNANT now or within the last year?

Get medical care right away if you experience any of the following symptoms:

Headache that won't go away or gets worse over time

Dizziness or fainting

Changes in your vision

Fever of 100.4°F or higher

Extreme swelling of your hands or feet

Thoughts of harming yourself or your baby

Trouble breathing

Chest pain or fast beating heart

Severe nausea and vomiting

Severe belly pain that doesn't go away

Baby's movement, stopping or slowing during pregnancy

Severe swelling, redness or pain of your face or arms

Vaginal bleeding or discharge during pregnancy

Heavy vaginal bleeding or discharge after pregnancy

Overwhelming weakness

These could be signs of very serious complications. If you can't reach a healthcare provider, go to the emergency room, the same as tell them you are pregnant or were pregnant within the last year. Learn more at www.upmc.com/pregnant

This list of urgent maternal warning signs was developed by the Council on Patient Safety in Women's Health Care. © 2022 UPMC Magee-Womens Hospital. HEAR logo is a trademark of UPMC Magee-Womens Hospital.

Scan for References

