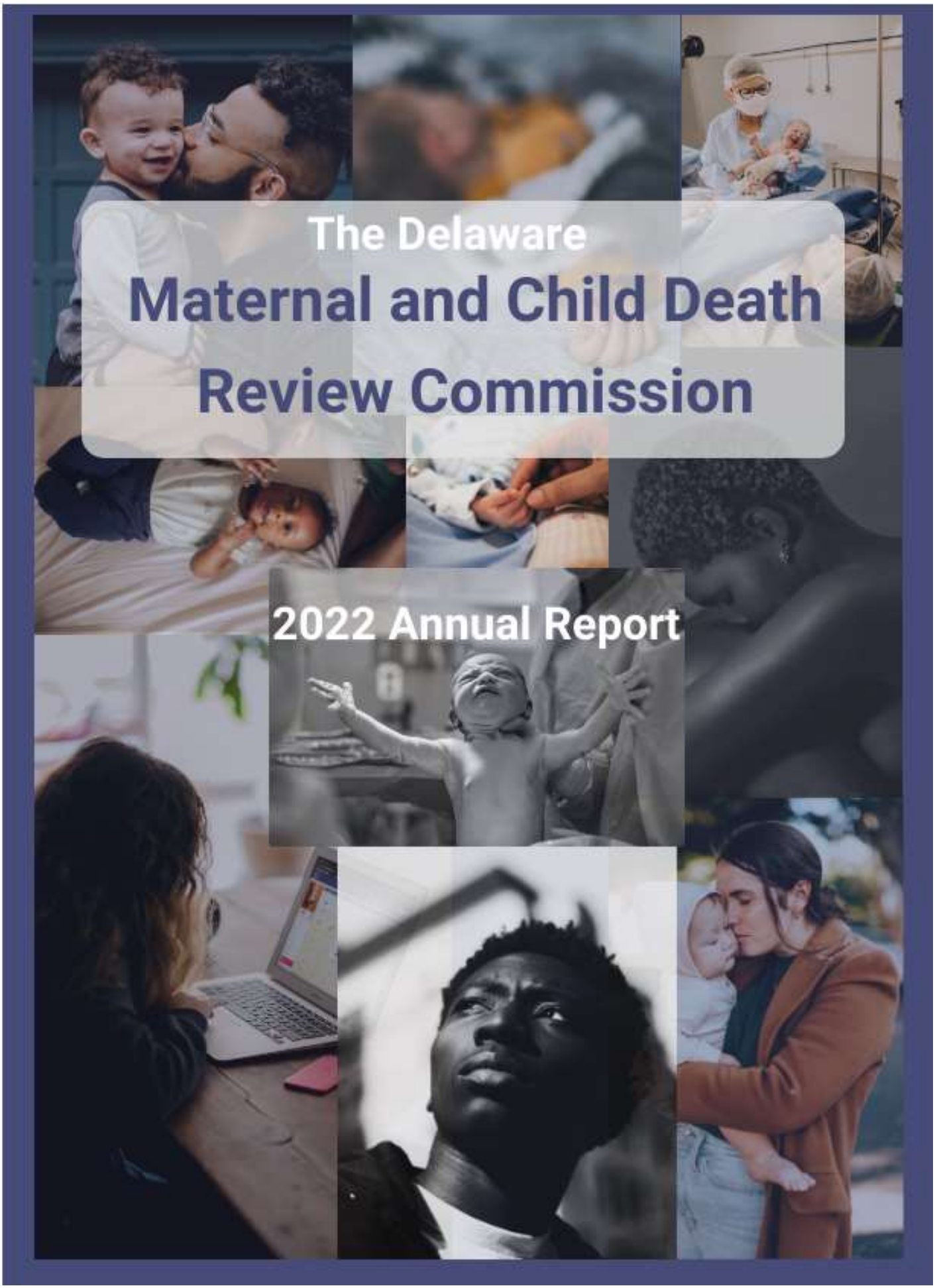

The Delaware Maternal and Child Death Review Commission

2022 Annual Report

The State of Delaware

Maternal and Child Death Review Commission

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The Honorable John Carney, Governor

State of Delaware

Garrett H.C. Colmorgen, MD, Chair

The Delaware MCDRC
REVIEW & PREVENTION
OF MATERNAL AND CHILD DEATHS

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List of Abbreviations

CAN	Child Abuse and Neglect
CDC	Centers for Disease Control and Prevention
CDR	Child Death Review
CPAC	Child Protection and Accountability Commission
CPS	Child Protective Services
CRT	Case Review Team
DFS	Division of Family Services
DMMA	Delaware Medicaid and Medical Assistance
DPH	Division of Public Health
DSAMH	Division of Substance Abuse and Mental Health
DSCYF	Department of Services for Children, Youth and Their Families
FIMR	Fetal and Infant Mortality Review
IPV	Intimate Partner Violence
MMR	Maternal Mortality Review
OB/GYN	Obstetrician gynecologist
PA	Pregnancy associated
PANR	Pregnancy associated but not related
PR	Pregnancy related
PRAMS	Pregnancy Risk Assessment Monitoring System
PRMR	Pregnancy related mortality ratio
PTSD	Post-traumatic stress disorder
SDOH	Social determinants of health
SDY	Sudden Death in the Young
SIDS	Sudden Infant Death Syndrome
SUD	Substance Use Disorder
UTD	Unable to determine

The Maternal and Child Death Review Commission

Oversees three fatality review programs that delve into the facts surrounding each case, the programs and systems of care with which the child, mother or family interacted and opportunities for improvement. Ultimately the MCDRC seeks to eliminate all preventable deaths in childhood and among women during and after pregnancy.

Beacuse every child and mother deserve a tommorrow

Child Death Review & Sudden Death in the Young

Fetal & Infant Mortality Review

Maternal Mortality Review

Cases reviewed

- Reviews infant deaths due to unsafe sleep, suspected abuse or neglect, and child deaths (1-17 years old) due to any cause.
- About 1 in 4 cases involved children with chronic health conditions.
- Thirteen cases were jointly reviewed with the Child Abuse and Neglect Panel.
- Fourteen unsafe sleep related deaths were reviewed.
- Nine out of 10 homicide deaths reviewed involved Black youth.

- Reviews a subset of infant not triaged to CDR/SDY and fetal deaths occurring after 20 weeks gestation.
- About 2 out of 3 cases reviewed were fetal deaths.
- Congenital anomalies were a leading cause of infant deaths and fetal deaths reviewed.
- Multiple maternal health issues--both physical and mental health--are prevalent in FIMR cases.
- Family social risk factors are common.

- Reviews all deaths occuring during pregnancy or up to one year after the end of pregnancy.
- Eleven cases were reviewed in 2022 with two deaths determined to be pregnancy related.
- Overdose was the leading cause among MMR cases.
- Family interviews were obtained in two cases reviewed and provided valuable insights into the life experiences of the mother.

Outputs

The Delaware Cribs for Kids program distributed 224 cribs in 2022 and reached over 100 people through trainings on infant safe sleep practices.

Seven FIMR recommendations emerged based on a total of 68 findings and 39 stregths noted in the 40 cases reviewed.

Seven priority recommendations were identified out of a total of 95 recommendations each linked to a contributing factor identified.

Executive Summary

The Maternal and Child Death Review Commission's (MCDRC) mission of public health surveillance to identify opportunities to improve the care of women, children and families is carried out through the work of its three fatality review programs. The longest-running program is Child Death Review (CDR) which was expanded in 2014 with support from the Centers for Disease Control and Prevention (CDC) to add Sudden Death in the Young (SDY) reviews. In 2022, CDR and SDY panels reviewed a total of 57 cases, 34 CDR cases and 23 SDY cases, the latter defined by the occurrence of a sudden, unexpected death in children under 18 years that is not due to homicide, suicide, or accident. Black children are overrepresented in CDR/SDY cases: while Black children make up 25% of the total population of 0-17-year-olds in Delaware, they made up 58% of the 2022 cases reviewed. This disparity is particularly marked for children under one year of age and for youth 15-17 years old. The manners of death with the greatest Black: White disparity are accidental, homicide and undetermined, particularly with underlying causes of death related to unsafe sleep conditions and firearms.

To mitigate the risk of unsafe sleep-related deaths, the Commission continued to oversee the Cribs for Kids program. In 2022, MCDRC staff distributed 224 cribs and reached over 320 people through safe sleep trainings. CDR/SDY findings also inform the Child Protection Accountability Commission (CPAC)-MCDRC Joint Action Plan to coordinate state agency efforts and standardize practices relating to child death investigations and family risk assessment.

Delaware's Fetal and Infant Mortality Review (FIMR) deliberated 40 cases in 2022, about two-thirds being fetal deaths occurring after 20 weeks gestation (n=26). Congenital anomalies were the most common underlying cause of infant deaths reviewed (n=5 out of 14 infant deaths). FIMR Case Review Teams identified 68 findings and 39 strengths based on the 40 FIMR cases reviewed. Findings and strengths correspond to systemic risk and protective factors, respectively. Most findings and strengths related to continuity of care, defined as any issue relating to a family accessing care when they want it, getting a referral for appropriate care, or the (in)effective communication between providers at different sites to coordinate a family's care, referral or follow up. Seven recommendations emerged as recurring themes based on FIMR data, findings, and strengths. These seven FIMR recommendations are:

1. **Care Coordination:** Women with multiple physical health, behavioral health and social health risk factors should be offered care coordination services and allowed the opportunity to decide which support(s) they want.
2. **Doula Services:** The MCDRC supports the expansion of access to doula services in the prenatal, intrapartum, and postpartum periods as a reimbursable service by Medicaid and private insurance. Also of value is access to bereavement doulas who can help women process the grief of a pregnancy loss and reduce the long-term impact of birth-related trauma and post-traumatic stress disorder.
3. **Pre- and Inter-conception Care**: Providers should promote all available opportunities for preconception care and inter-conception care to ensure women are as healthy and informed as possible prior to pregnancy. Especially for women who have had a pregnancy loss, follow up and patient engagement between pregnancies may promote physical and mental recovery.

4. **Quality of Care:** Given the provider shortage at various levels, which in part preceded but has also been intensified by the Covid pandemic, the state of Delaware and its agencies, hospital systems and insurers should consider promoting and incentivizing new ways to access multidisciplinary, high-quality care.
5. **Mental Health:** State agencies, professional associations and hospital systems should consider promoting trainings and standardized referral pathways to address the tremendous need for maternal mental health services. Women with lower acuity mental health issues should be managed by their primary or obstetric care provider. Women with higher acuity needs should be referred for behavioral health care in a timely manner.
6. **Respectful Maternity Care**: Providers should consider receiving ongoing training and supports to enhance their skill in effective patient communication and shared decision making in keeping with the highest standards of respectful maternity care.
7. **Social Determinants of Health**: Nursing and medical staff should consider being trained in taking a detailed psychosocial history in keeping with the social determinants of health (SDOH) framework. Ongoing training is also important to keep staff aware of ways to make referrals and the current array of resources and programs available in Delaware to support SDOH needs.

Seven priority recommendations also emerged from the Maternal Mortality Review (MMR) program's deliberation of 11 cases. The MCDRC is tasked with reviewing all pregnancy associated deaths, those deaths occurring while a person is pregnant or up to one year after the end of pregnancy, irrespective of cause. Six out of the 11 cases reviewed in 2022 were due to drug overdoses. Many MMR cases involved adverse maternal experiences related to mental health morbidity, substance use disorder (SUD), history of trauma, lack of social support and/or interpersonal violence (IPV). The priority recommendations identified by vote of the MMR members based on a total of 95 recommendations, each corresponding to an identified risk factor in a specific case, are:

1. **Access to Services**: Mental health and SUD services should be available to all residents. Crisis intervention services should be made available with adequate resources to fully staff and support the implementation of the 988 call line in Delaware, including adequate public education to make people aware of the call line's purpose and function.
2. **Provider Knowledge on SUD**: The Division of Substance Abuse and Mental Health (DSAMH) and professional organizations will offer ongoing trainings for providers on SUD to enhance empathy and true understanding of the condition as a treatable, chronic brain disease and thereby decreasing tolerance for discriminatory actions against patients suffering from the condition.
3. **SUD**: Mental health and SUD services should be available to all state residents.
4. **Provider Knowledge on Mental Health**: DSAMH should offer resources to healthcare providers describing available mental health supports during pregnancy and postpartum, specifically addressing concerns about social isolation and telemedicine therapies.
5. **Quality of Services in the Community:** Communities should communicate services available to individuals experiencing IPV. More emergency funds should be made available to victims of IPV to use to enact a safety plan.
6. **Provider Knowledge on Obstetric Care:** Labor and delivery staff should be regularly trained on responding to obstetric emergencies in a coordinated team approach.

7. **Social Determinants of Health:** Hospitals should screen women for and document social risk factors as well as a medical home. Patients who are at high risk for medical and/or social complications could be given high priority for case management services while admitted, helping engage the patient and identify her most pressing needs and opportunities to help.

This annual report is part of the Commission's efforts to discharge its duties and disseminate findings and recommendations from its fatality review programs to improve the system of care for women, children and families. Future efforts will include the expansion of partnerships with communities most impacted by maternal and child deaths to increase the implementation of community-designed prevention strategies tailored to local resources and needs.

Introduction: the *Maternal* and Child Death Review Commission

In 2022 the Delaware General Assembly passed House Bill 340 as part of the state MOMNIBUS changing the name of the Child Death Review Commission to the Maternal and Child Death Review Commission (MCDRC). This name change more accurately reflects the scope and purpose of the MCDRC and the three fatality review programs it oversees. House Bill 340 also revised the membership of the Commission to include more representation of state agencies, community advocates and multidisciplinary maternal and child health professionals. In all, these changes seek to hone a more inclusive Commission reflective of Delaware's population and to bring to the table the knowledge and expertise to tackle some of its most important issues.

The work of the MCDRC centers on its three fatality review programs:

- Child Death Review and Sudden Death in the Young
- Fetal and Infant Mortality Review
- Maternal Mortality Review

Through these programs, multidisciplinary panels review select cases of fetal, infant, child and maternal deaths to gain insights on underlying causes, contributing factors and protective factors that influenced the experience and outcome of the families involved. This report presents key findings and recommendations put forth by the Commission's fatality review panels based on cases reviewed in 2022. Each panel has a different focus and composition, and they provide a unique perspective on the factors that put families at risk for premature maternal and child deaths. Even through these different lenses, some common themes do emerge, a primary one being missed connections to care and support. Better connections to care are needed to help women, children, and families transition between different healthcare providers, between healthcare and community-based support services, and between physical health and mental health services.

The work of the Commission has never been timelier and more relevant. Each maternal and child death is a tragedy and a call to learn and do better. These deaths and the findings, strengths, and recommendations they reveal signal where systems of care need to grow, adapt and sometimes be radically reconsidered. As the Commission's work continues, it will take more people thinking in new ways to tackle deep-seated issues and their causes. The Commission's findings and recommendations will hopefully aid healthcare decision-makers, legislators, and community partners in their work to identify opportunities for prevention and health promotion.

Child Death Review / Sudden Death in the Young

Child Death Review (CDR) is the longest running fatality review program in Delaware predicated on the original statutory mandate of the MCDRC to review all deaths of state residents under 18 years of age. In 2014, Delaware received grant funding from the Centers for Disease Control and Prevention (CDC) to conduct Sudden Death in the Young (SDY) reviews on a subset of child deaths that are sudden and unexpected in nature.[1] CDR and SDY review infant deaths that may involve possible unsafe sleep factors, abuse, or neglect. All other infant deaths are reviewed by the Fetal and Infant Mortality Review (FIMR) program.

Case Selection Criteria

A sudden, unexpected death is a death that is:

1. Sudden, that is within 24 hours of the first onset of symptoms or following a resuscitation from a cardiac event, and
2. Unexpected, involving someone who is in good health or who had a stable chronic condition or acute illness that would not be expected to be fatal.

These deaths are reviewed by the Sudden Death in the Young (SDY) panel.

All other child deaths between 1-17 years of age are reviewed by the Child Death Review (CDR) panel. Many of these other deaths are homicides, suicides, or accidental deaths with no underlying medical condition suspected in the child.

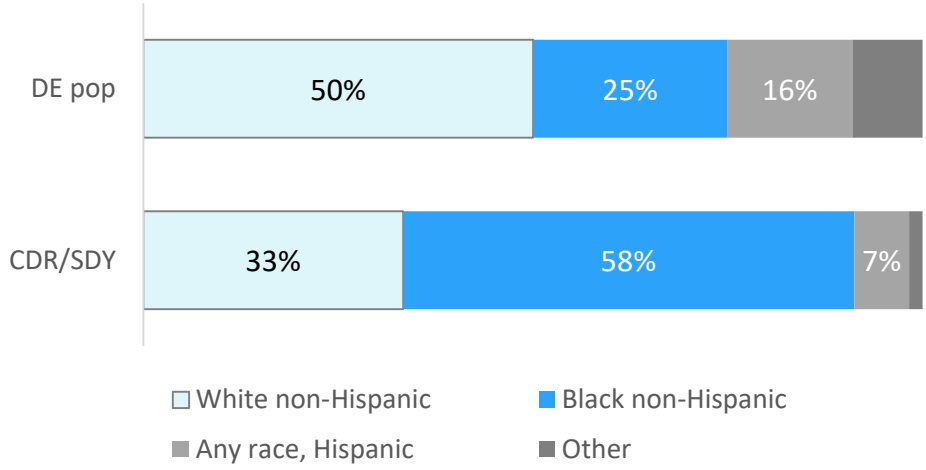
Infant deaths before the age of 1 year are triaged based on the suspected underlying cause of death to either:

- The SDY panel if unsafe sleep conditions may have contributed or the manner of death is undetermined,
- The CDR panel (sometimes in conjunction with the Child Abuse and Neglect panel),
- Or the Fetal and Infant Mortality Review (FIMR) panel.

In 2022 the CDR panel reviewed 34 cases and SDY panels (initial and advanced medical) reviewed 23 cases, for a total of 57 cases. Thirteen cases (23%) were jointly reviewed with the Child Abuse and Neglect (CAN) panel. Seventeen cases (30%) were infants, and 15 cases (26%) involved children with known chronic health conditions. Just over half of cases (58%) were males. Black children are overrepresented in CDR/SDY cases: while Black children make up 25% of the total population of 0-17-year-olds in Delaware, they made up 58% of the 2022 deaths reviewed (Figure C1). For more details on CDR/SDY case demographics, see the 2022 MCDRC Annual Report data addendum.

[1] Centers for Disease Control and Prevention (CDC). SDY case registry algorithm.

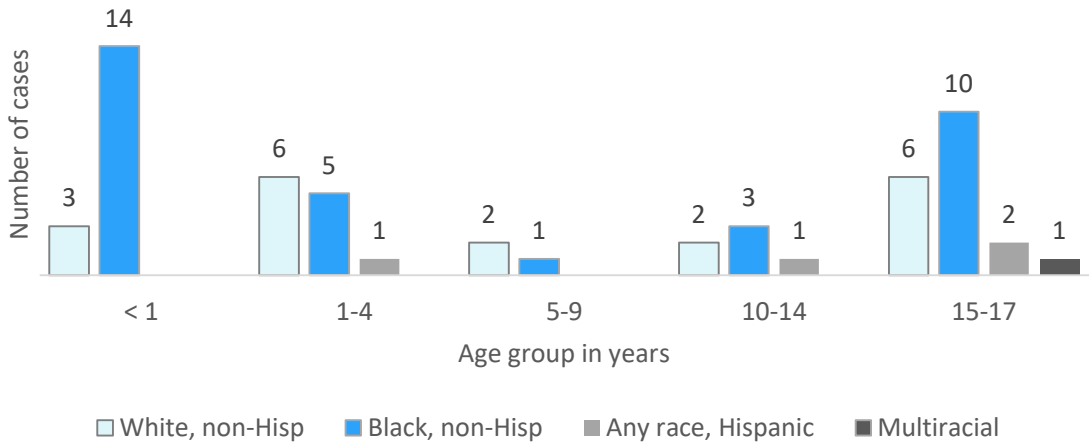
Figure C1: Race and ethnicity of children 0-17 years in 2022

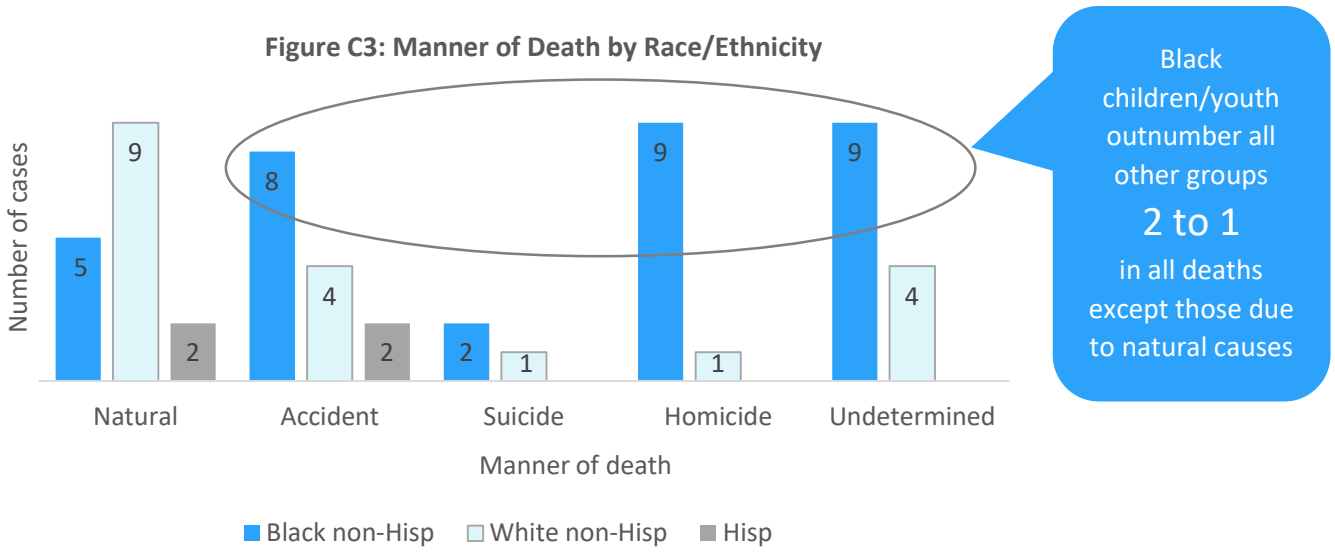


Note: Delaware population data retrieved from the Annie E. Casey Foundation, Kids Count Data Center. Delaware Indicators https://datacenter.kidscount.org/data#DE/5/2/3,6,7,5/char/0 on January 31, 2023.

The overall Black/White disparity in CDR/SDY cases is stark but it masks some important differences occurring within certain age groups and manners of death. Black youth outnumber all other race and ethnic groups combined in two particular age categories: among infants under 1 year old and youth 15-17 years old (Figure C2). In addition, for all manners of death except natural, Black children and youth outnumber all other race and ethnicity groups combined 2:1 (Figure C3).

Figure C2: Age groups by Race/Ethnicity



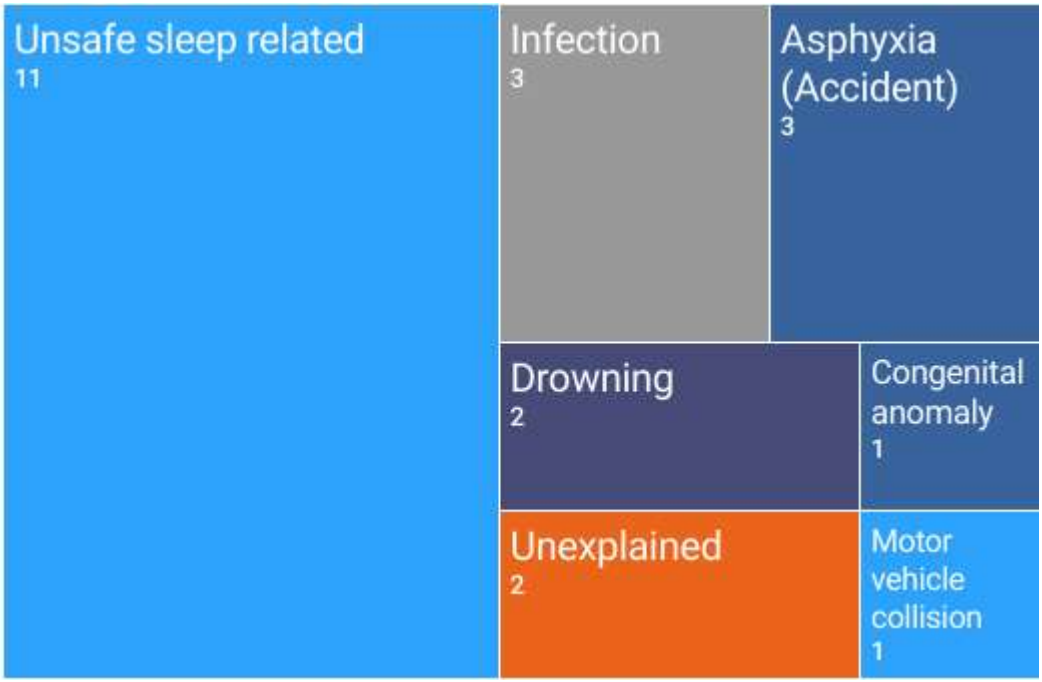


The types of cases reviewed by the CDR and SDY panels differ in their manner and causes of death. Figures C4 and C5 represent the number of cases by underlying cause of death reviewed by the CDR and SDY panels in 2022, respectively.

Figure C4: The number of cases and their underlying cause of death (manner) reviewed by the CDR panel in 2022 (n=34 total)

Note: Other includes such causes as seizure, infection, and fall.
Bodily force or weapon include homicide and suicide manners of death.

Figure C5: The number of cases and their underlying cause of death (manner) reviewed by the SDY panel in 2022 (n=23 total)



Unsafe Sleep Deaths

Fourteen unsafe sleep related deaths were reviewed in 2022 of which 11 were infants. About 1 in 3 infants who died were born prematurely (36%). Black infants and children were at increased risk of unsafe sleep related deaths making up 71% of the reviewed cases. As found in prior years, almost all cases had more than one environmental risk factor such as sleep surface, co-sleeping or tobacco, drug, or alcohol use in the home (Table C1 and 2022 MCDRC Annual Report data addendum). The prevalence of environmental risk factors is higher in unsafe sleep related deaths than in a general population estimate of infant care practices as captured by the Pregnancy Risk Assessment Monitoring System (PRAMS), a randomized survey sampling women who have recently delivered in Delaware. In 2022 the MCDRC staff collaborated with the Delaware Division of Public Health (DPH) to design parent and provider materials with safe sleep messaging (Figure C6). In 2023 MCDRC staff will develop a distribution plan in conjunction with DPH and the Division of Substance Abuse and Mental Health (DSAMH) to ensure materials are widely available through medical, behavioral health and community-based sites across the state as well as online.

In the last five years (2018-2022), 6 out of 10 unsafe sleep related deaths have involved Black children.

Table C1: Risk factors present in unsafe sleep-related deaths compared to general infant care practices as captured by PRAMS[1]

		2022 Unsafe sleep deaths	PRAMS 2020
	Not in crib, bassinette or side sleeper	79%	10%
	Not sleeping on back	43%	22%
	Unsafe bedding or toys near infant	79%	8%
	Sleeping with other people	79%	23%
	Intrauterine drug exposure	36%	7%[2]
	Tobacco use: mother	45%	21%
	Adult was drug or alcohol impaired at time of death	21%	--

[1]DPH. Delaware Pregnancy Risk Assessment Monitoring System (PRAMS) 2020 Analysis. Personal communication with George Yocher.

[2]Delaware 2020 Substance Exposed Infant Database. Personal communication with Jen Donahue.

Figure C6: Parent/caregiver flyer developed for safe sleep messaging

Safe Sleep for Your Baby

Sudden Unexpected Infant Death (SUID) is the leading cause of death for infants 1 month to 1 year of age. This includes unsafe sleep-related deaths. Read below to learn about safe sleep practices recommended by the American Academy of Pediatrics.[1]

Sleep-Related Death in Delaware

In Delaware, about one infant dies every month from unsafe sleep conditions.[2]

These deaths are preventable.

The majority of sleep-related infant deaths in Delaware involve unsafe sleep practices (for example: a baby not sleeping alone, not sleeping on their back, not sleeping in a crib).[2]

Family stress can increase the chance of unsafe sleep practices.[3]

Safe sleep practices can be improved. In 2019, only 1 in 3 parents used a separate and safe sleep surface.[3]

Follow the ABC Steps for Safe Sleep

ALONE

Babies sleep safely when they are **alone**, without other people and without soft bedding. Babies can share a room, but not a bed.

BACK

Babies sleep safely when they are placed on their **back** for every sleep.

CRIB

Babies sleep safely on a firm flat surface, such as a **crib** or Pack N'Play.

1. Create a Safe Sleep Area

The ABCs help to keep your baby safe while sleeping. When you put your baby to sleep, make sure that nothing can interfere with your baby's breathing. Remove all pillows, blankets, toys and other soft objects from the sleep area.

Checklist:

- ☑ Prepare a safe sleep area for your baby that follows the ABCs.
- ☑ Follow the ABCs every single time your baby goes to sleep, including naps.
- ☑ Teach everyone who cares for your baby, including childcare providers and babysitters, about the ABCs and their role in protecting your baby from choking or suffocation. You can share this resource with them.
- ☑ Ask your health care provider questions you have about the ABCs.

2. Develop a Safe Sleep Support Plan

A support plan can help your baby sleep safely during every sleep. Caring for your baby can be exhausting at times. When you are tired or feeling stressed, you may be less likely to put your baby to sleep safely. Have a plan in place to call someone who can lend a hand and take care of your baby, even in the middle of the night, when you need a break.

Checklist:

- ☑ Decide who in your life you will ask to help out when needed. You can ask friends, other parents, family members, or partners.
- ☑ Discuss your support plan and the ABCs with everyone that agrees to help you. Make a plan for when you will call them and what they will do when you need their help.

  Your support team should be ready to:

  - ☑ Check and make sure that your baby's sleep area is safe.
  - ☑ Take care of your baby to give you a break when you are stressed, or give you time to rest when you are tired.

REVIEW & PREVENTION

DELAWARE HEALTH AND SOCIAL SERVICES
Division of Public Health

[1] American Academy of Pediatrics. (2020, December 10). Safe Sleep Campaign Toolkit.
[2] Child Death Review Commission. (2021). 2020 Child Death Review Commission (CDRC) Data Addendum.
[3] Jiri, T. (2021). Safe Sleep: Findings From Delaware PRAMS Data. John Snow, Inc.

Visit DE Thrives at www.dethrives.com/safe-sleep/overview for more information on safe sleep.

The MCDRC runs the Delaware Cribs for Kids program. In 2022, the MCDRC Outreach Coordinator distributed 224 cribs and reached over 320 people through safe sleep trainings. Trainings were held in partnership with the New Castle County Police Department, the Delaware Coalition for Injury Prevention and Harper's Heart. In addition, information was shared on social media to increase awareness on Sudden Infant Death Syndrome (SIDS) and safe sleep practices.

Homicide Deaths

Homicides are the only cause of child deaths that have been increasing among Delaware youth. As reported by the DPH in the "Delaware Vital Statistics Annual Report Mortality, 2020," youth homicides have more than doubled between 2000-2004 to 2016-2020, increasing from 2.8 deaths per 100,000 children to 5.8 deaths. Firearms were the means of fatal injury in 80% of the youth homicides in the 2016-2020 period.[2] Data from the DPH on adolescent mortality rates from firearm-related deaths—which may include homicides as well as suicides—reveal that Black non-Hispanic youth have a firearm-related mortality rate that is over 7 times higher than White youth.[3] The CDR panel reviewed ten homicide cases in 2022, nine of them involving Black youth. Firearms were the means of fatal injury in six of these cases.

[2] Delaware Health Statistics Center. Delaware Vital Statistics Annual Report, 2020. Delaware Department of Health and Social Services, Division of Public Health: 2023.
[3] K Hussaini. Child Health Indicators (0-17 years): life course and social determinants of health. Division of Public Health.

The CPAC-MCDRC Joint Action Plan

CDR and SDY findings inform the Child Protection Accountability Commission (CPAC)-MCDRC Joint Action Plan. The most recent action plan was developed in September 2020 and is reviewed regularly by CPAC and MCDRC staff. The joint action plan can be accessed on the Reports page of the MCDRC website.

Fetal and Infant Mortality Review

Delaware's FIMR program reviews a random subset of all fetal deaths occurring after 20 weeks gestation and infant deaths not involving suspected child abuse, neglect, or unsafe sleep conditions. Against the backdrop of a state infant mortality rate that has decreased 30% between 2000-2004 and 2016-2020 to 6.5 deaths per 1,000 live births and a fetal death rate that has been fairly consistent at just over 5 deaths per 1,000 live births, FIMR continues to function as a public health surveillance and sentinel reporting system.[4] Through the in-depth review of records from medical providers, hospitals, state agencies including child welfare and the judicial system, FIMR Case Review Teams (CRT) try to gain insights on how the system of care did or did not meet the needs of the birthing parent experiencing the pregnancy loss, the FIMR mother. This purpose is further expanded when a maternal interview is available. An experienced FIMR maternal interviewer reaches out to all women with a pregnancy loss and invites them to participate in an interview. The interview allows FIMR CRTs to hear the story of the mother's pregnancy, her life experiences, and interactions with providers across the health system. The FIMR mothers' voices often offer a key piece of the puzzle to understand how systems of care can better function to support women and empower them to improve their well-being. This section highlights key demographics of the FIMR cases reviewed in 2022, findings and strengths identified by the CRTs that are systemic risk and protective factors, respectively, and some of the story moments from maternal interviews that exemplify key findings and recommendations in the way that matters most: through the perspective of the families affected by pregnancy loss.

In 2022, FIMR CRTs met 13 times to review 40 cases. For the second year in a row, fetal death cases made up about two-thirds of cases: 26 cases (65%) were fetal deaths, and 14 cases (35%) were infant deaths. As seen every year, Black mothers and babies were over-represented in FIMR cases. Almost half (48%) of 2022 FIMR cases occurred to Black mothers, but they made up only 28% of women giving birth in 2020.[5] (For more details on the FIMR data, see the 2022 MCDRC Annual Report data addendum.) A higher proportion of 2022 FIMR cases (63%) also involved mothers insured by Medicaid compared to all women delivering in Delaware, 41% of whom were on Medicaid in 2020.[6]

Underlying causes of death vary for infant and fetal cases. For the second year, congenital anomalies outnumbered prematurity as the most common underlying cause of death among infant cases reviewed in 2022 (Figure F1). Similar to national data, the most common cause of fetal deaths could not be specified, but placental and cord problems and congenital anomalies were top underlying

[4] Delaware Health Statistics Center. *Delaware Vital Statistics Annual Report, 2020.* Delaware Department of Health and Social Services, Division of Public Health: 2023.
[5] Delaware Health Statistics Center. *Delaware Vital Statistics Annual Report, 2020.* Delaware Department of Health and Social Services, Division of Public Health: 2023.
[6] Delaware Health Statistics Center. *Delaware Vital Statistics Annual Report, 2020.* Delaware Department of Health and Social Services, Division of Public Health: 2023.

causes that could be identified (Figure F2).[7] Fetal deaths reviewed in 2022 were also much more likely to have occurred earlier in gestation between 20 and 27 weeks compared to prior years of review. Early gestational fetal deaths made up 58% of the 26 cases reviewed in 2022 (2022 MCDRC Annual Report data addendum).

Figure F1: Underlying causes of infant deaths reviewed in 2022 (n=14 cases)

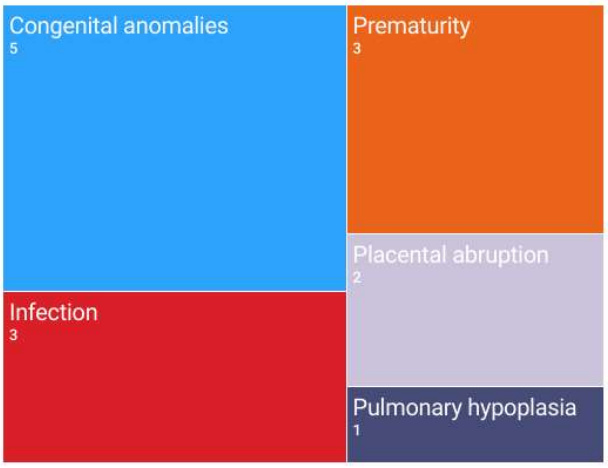
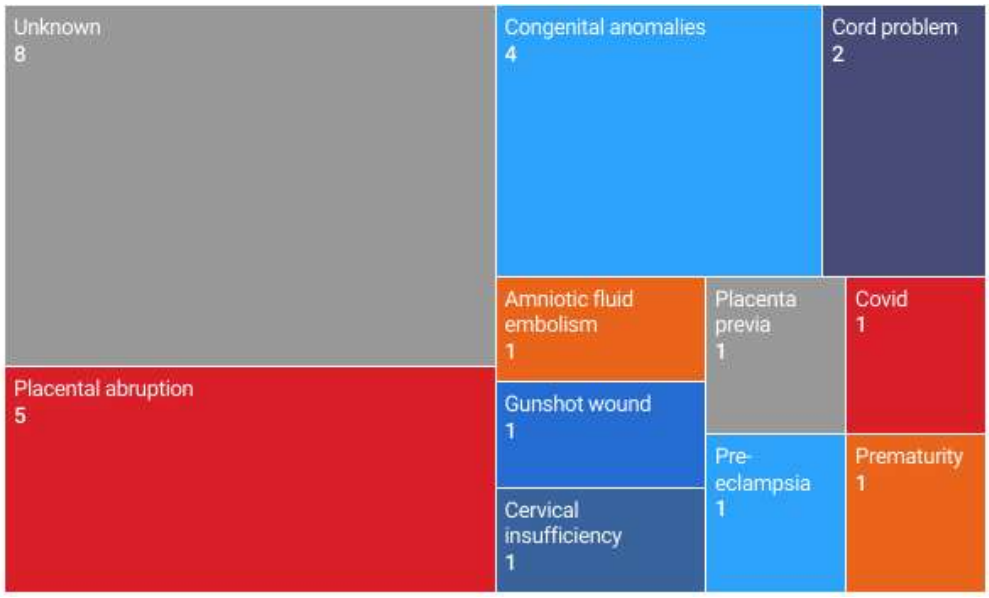


Figure F2: Underlying causes of fetal deaths reviewed in 2022 (n=26 cases)*



*Two fetal deaths were associated with maternal deaths and assigned the same underlying cause as their mother.

While deliberating FIMR cases, CRTs identified systemic risk factors (findings) and protective factors (strengths) following national FIMR guidance. In the 40 cases reviewed, there were 68 findings and 39 strengths identified overall. These findings and strengths were grouped into categories (Figure F3). The most common category of findings and strengths was continuity of care, defined as any issue relating to a family accessing care when they want it, getting a referral for appropriate care, or the

[7] Gregory ECW, Valenzuela CP, Hoyert DL. *Fetal mortality: United States, 2020*. National Vital Statistics Reports; vol 71 no 4. Hyattsville, MD; National Center for Health Statistics, 2022.

(in)effective communication between providers at different sites to coordinate a family's care, referral or follow up. FIMR CRT members reviewed FIMR findings, strengths as well as descriptive and quantitative data at an annual retreat to identify their priority recommendations. Seven recommendations came out of the FIMR retreat discussion and are presented below along with the accompanying rationale drawing from FIMR data, FIMR findings and strengths, the published scientific literature and illustrative story moments from case narratives and maternal interviews. (For a full description of each category and its relevant FIMR data, see the 2022 MCDRC Annual Report data addendum.)

Figure F3: Number of FIMR findings and strengths identified in 2022 cases by category

Category	Findings (n=68 total)	Strengths (n=39 total)
Maternal Health	3	0
Infant Health	9	1
Continuity of care	10	11
Mental health	3	8
Substance use disorder	3	2
Bereavement support	6	5
Patient provider communication	5	2
Shared decision making	3	2
Quality of care	6	3
Family planning and birth spacing education	5	3
Family support and social determinants of health	5	1
Covid	5	0
Fetal kick counts	2	0
FIMR process	3	1

Care Coordination

Recommendation: Women with multiple physical health, behavioral health and social health risk factors should be offered care coordination services and allowed the opportunity to decide which support(s) they want.

Rationale:

- The system of care for women with physical health, behavioral health and/or social risk factors is fragmented and complex. FIMR findings demonstrate missed opportunities for care coordination as patients are seen by different providers and across different sites, often to the detriment of patients' well-being.
- The landscape of community-based services is increasing in Delaware and may serve as another model of care coordination. Care coordination may be mediated by nurses, social workers, Medicaid managed care organization case managers, community health workers or peer support specialists.
- Expected outcomes for women engaged with care coordination include fewer missed appointments, better management of chronic health conditions and decreased patient stress.

In an interview, a FIMR mother said she had difficulty getting in for a prenatal visit due to the obstetric provider's schedule being full. She decided to see her primary care doctor as a bridge to care while waiting for her first prenatal appointment. She had chronic asthma, anemia and obesity.

A Federally Qualified Health Center care coordinator and interpreter often accompanied a FIMR mother to her visits, helping provide transportation. The mother was able to attend multiple care visits at different sites as a result and had well-coordinated care for complex fetal issues.

Strength

Doula services

Recommendation: The MCDRC supports the expansion of access to doula services in the prenatal, intrapartum, and postpartum periods as a reimbursable service by Medicaid and private insurance. Also of value is access to bereavement doulas who can help women process the grief of a pregnancy loss and reduce the long-term impact of birth-related trauma and post-traumatic stress disorder (PTSD).

Rationale:

- Doula support during pregnancy and childbirth has been shown to improve women's experience of labor and delivery, reduce rates of Cesarean delivery, improve infant Apgar scores and increase rates of breastfeeding initiation.[8]

[8] Knocke K, Chappel A, Sugar S, De Lew N, Sommers BD. Doula Care and Maternal Health: An Evidence Review. (Issue Brief No. HP-2022-24). Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services. December 2022.

- Pregnancy loss is a known risk factor for prolonged mental health sequelae in women. Bereaved mothers have a four times higher rate of depression and seven times higher rate of PTSD than mothers who did not experience a loss.[9] Bereavement doulas can help support a family experiencing the loss of their baby and help identify unmet mental health needs in the parents.
- Among women who have been systemically and historically marginalized, the added support of a doula may help them advocate for themselves and their needs in the medical setting. To be of greatest service, doulas should be linguistically and culturally competent to work with women from marginalized communities.

"She doesn't know what to do about her empty heart and empty arms."

--Hospital staff member providing bereavement support

Pre- and inter-conception care

Recommendation: Providers should promote all available opportunities for preconception care and inter-conception care to ensure women are as healthy and informed as possible prior to pregnancy. Especially for women who have had a pregnancy loss, follow up and patient engagement between pregnancies may promote physical and mental recovery.

Rationale:

- Thirty-eight percent of FIMR mothers had a history of previous miscarriages; 70% were overweight or obese; 18% had pre-existing hypertension. These data indicate a high prevalence of chronic health issues in women who experience a fetal or infant loss.
- In addition, during the index pregnancy many FIMR mothers experienced obstetric complications such as pre-eclampsia (23%), placental abruption (28%) or infection (30%).
- For women with a history of obstetric complications or fetal anomalies, additional referrals in the inter-conception period may be valuable to discuss the mother's options for care and management during any subsequent pregnancy to improve outcomes.

At the postpartum visit, the provider reviewed the chromosomal anomaly with the mother in depth. They discussed what could happen in future pregnancies, and the mother was advised to have a Maternal Fetal Medicine consult if she gets pregnant again.

Strength

Finding

Given the mother's history, she was not referred to Maternal Fetal Medicine for a preconception care consult to address future fertility and pregnancy management.

[9] Gold KJ, Leon I, Boggs ME, Sen A. Depression and posttraumatic stress symptoms after perinatal loss in a population-based sample. Journal of Women's Health 2016. 25(3): 263-9.

Quality of care

Recommendation: Given the provider shortage at various levels, which in part preceded but has also been intensified by the Covid pandemic, the state of Delaware and its agencies, hospital systems and insurers should consider promoting and incentivizing new ways to access multidisciplinary, high-quality care.

Rationale:

- FIMR cases reveal examples of women having difficulty accessing timely obstetric care. Certain rural parts of Delaware in particular have been greatly impacted by the shortage of obstetric providers, leading to longer wait times to get into care and greater distances to travel for care.
- Covid has greatly impacted the levels and types of staff available in the outpatient and inpatient setting. Loss of nursing, physician and ancillary staff have negatively impacted quality of care and patients' experiences of care. Five FIMR findings may be linked to staffing shortages and reveal the negative experiences these had on patients during the time of labor and delivery.
- Nurse midwives and nurses are two types of providers in particular whose impact is seen in FIMR cases.

The mother became ill during the last minutes of her baby's life and was transported to obstetric triage for assessment. The nurse swaddled and held the baby as the baby passed away in her arms.

The certified nurse midwife called the mother while she was still in the hospital following her stillbirth and offered support. At the postpartum visit, the midwife spent a lot of time with the parents to review the events of the loss and the delivery.

Strength

Mental health

Recommendation: State agencies, professional associations and hospital systems should consider promoting trainings and standardized referral pathways to address the tremendous need for maternal mental health services. Women with lower acuity mental health issues should be managed by their primary or obstetric care provider. Women with higher acuity needs should be referred for behavioral health care in a timely manner.

Rationale:

- Perinatal mood and anxiety disorders are the most common complication of pregnancy.[10]
- Mental health issues are contributory in almost half of Delaware's pregnancy associated deaths (46%).[11]

[10] Bauman BL, Ko JY, Cox S, et al. *Vital Signs:* Postpartum Depressive Symptoms and Provider Discussions About Perinatal Depression — United States, 2018. MMWR Morb Mortal Wkly Rep 2020;69:575–581. DOI: http://dx.doi.org/10.15585/mmwr.mm6919a2

[11] MCDRC. 2021 Annual Report.

- FIMR cases indicate a high burden of mental health morbidity, particularly due to depression and anxiety: 43% of FIMR mothers have a history of mental illness and 45% experience depression or another mental health morbidity in the postpartum period.
- The need for mental health services exceeds the capacity for specialized mental health providers in Delaware, and so it is important that patients with lower acuity receive care through their established medical providers, either their primary care or obstetric providers. Indeed, many FIMR strengths demonstrate that obstetric providers are screening and treating the common conditions of depression and anxiety (Figure F4).
- Patients with higher acuity mental health issues may need specialized psychiatric or behavioral health services. There is capacity in the state to offer specialized care for perinatal mood and anxiety disorders as evidenced by ChristianaCare's Center for Women's Emotional Wellness. Patients in need of specialty care should be identified as soon as possible and have help accessing these services.

"(The loss) never really leaves you. You learn to grow with it. You are stronger than you think you are."

--FIMR mother

Respectful Maternity Care

Recommendation: Providers should consider receiving ongoing training and supports to enhance their skill in effective patient communication and shared decision making in keeping with the highest standards of respectful maternity care.

Rationale:

- With the growing array of possible medical interventions for maternal, fetal, or infant conditions, patients sometimes have a large amount of information to process quickly and many decisions to make about the type of interventions available for them or their baby. These decisions can be overwhelming, and patients need providers who are skillful in guiding them through the decision-making process, offering information in varied ways, and giving them the time and space to process the information.
- Many FIMR findings and strengths relate to examples of this art of patient and provider communication and shared decision making. Twenty-three percent of FIMR mothers appeared to be dissatisfied with some aspect of their care, and in 15% of cases there was documented poor provider to patient communication.
- There are specialty providers such as the Infant Maternal Pediatric Advanced Care Team (IMPACT) and the Advanced Delivery Unit in Delaware that can help families navigate complex medical decision-making and palliative care in the perinatal period and who adopt a family-centered approach.

The mother could not tell her story of previously having had premature prolonged rupture of the membranes but still making it several weeks before delivering her baby who survived. For this reason, she felt her current providers dismissed her hopes and wishes for still carrying her pregnancy.

The parents wanted the delivery to be a private matter. The hospital staff acknowledged this but offered to allow additional friends or family to visit if the parents desired .

Strength

Social Determinants of Health

Recommendation: Nursing and medical staff should consider being trained in taking a detailed psychosocial history in keeping with the social determinants of health (SDOH) framework. Ongoing training is also important to keep staff aware of ways to make referrals and the current array of resources and programs available in Delaware to support SDOH needs.

Rationale:

- A high proportion of FIMR mothers experience social risk factors such as multiple stressors (50%), a history of child protective services (CPS) referrals (50%), and/or involvement with the judicial system (25% of mothers).
- Screening for social risk factors can identify women who would benefit from additional supports and reduce the risk for poor outcomes or increased suffering and stress.
- The landscape of community-based services is increasing in Delaware. While evidence-based home visiting programs such as Healthy Families Delaware, Nurse Family Partnership and Parents as Teachers continue to operate, new programs and initiatives are expanding capacity for wraparound supports through the work of:
    a. Community health workers such as ChristianaCare's Health Ambassadors program;
    b. Community doulas supported by the Parent Information Center of Delaware, Black Mothers in Power and other programs; and
    c. Medicaid Managed Care Organizations' case managers.

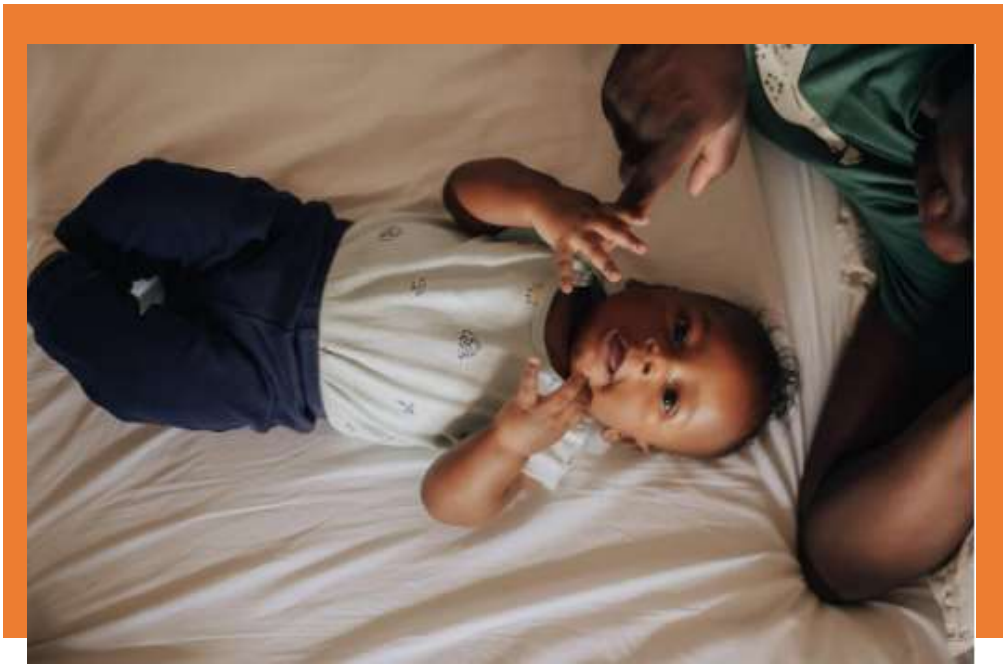
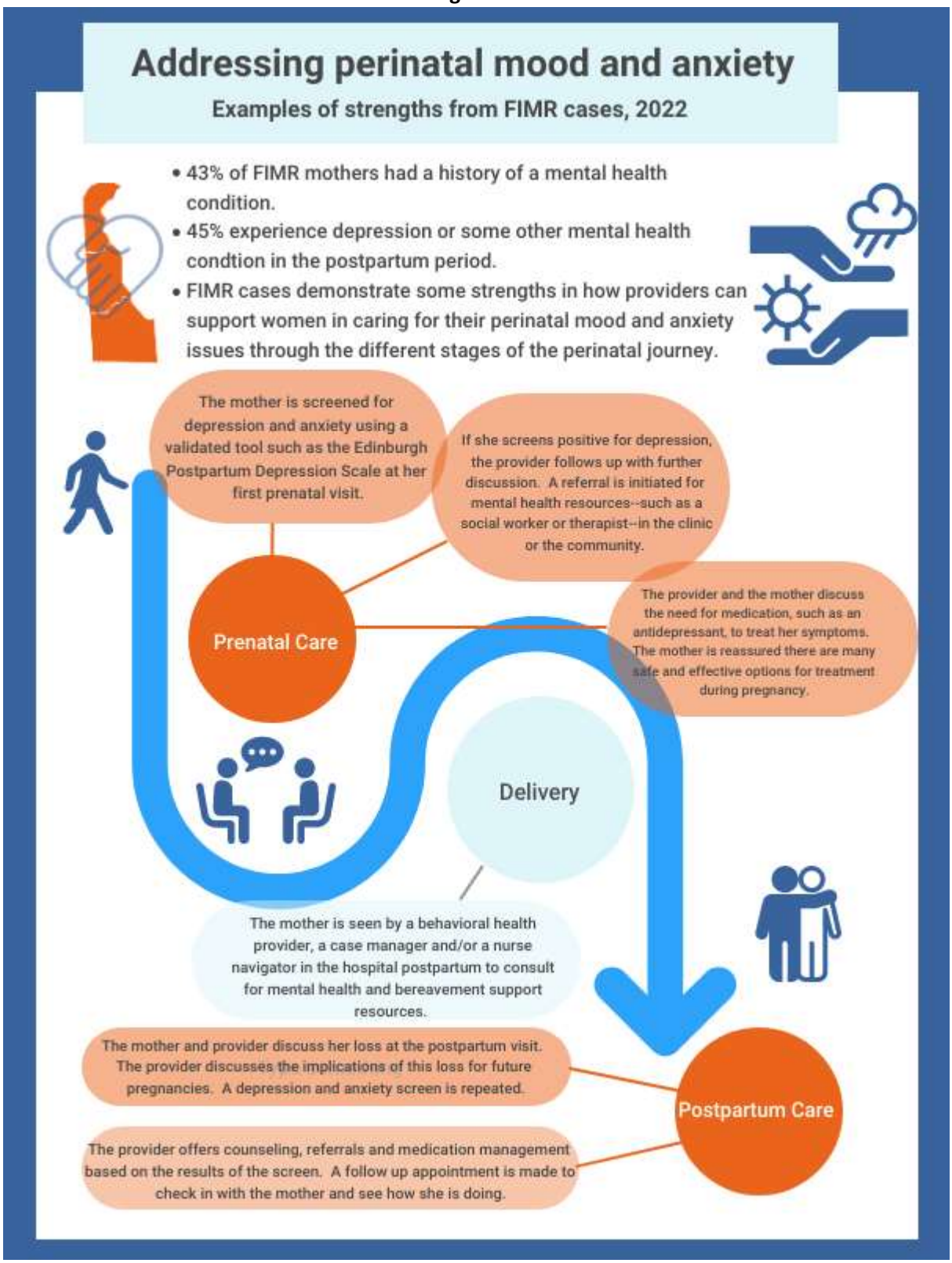


Table F1: FIMR recommendations based on 2022 cases

Category	FIMR Recommendation
Care coordination	Women with multiple physical health, behavioral health and social health risk factors should be offered care coordination services and allowed the opportunity to decide which support(s) they want.
Doula services	The MCDRC supports the expansion of access to doula services in the prenatal, intrapartum, and postpartum periods as a reimbursable service by Medicaid and private insurance. Also of value is access to bereavement doulas who can help women process the grief of a pregnancy loss and reduce the long-term impact of birth-related trauma and post-traumatic stress disorder (PTSD).
Pre- and inter-conception care	Providers should promote all available opportunities for preconception care and inter-conception care to ensure women are as healthy and informed as possible prior to pregnancy. Especially for women who have had a pregnancy loss, follow up and patient engagement between pregnancies may promote physical and mental recovery.
Quality of care	Given the provider shortage at various levels, which in part preceded but has also been intensified by the Covid pandemic, the state of Delaware and its agencies, hospital systems and insurers should consider promoting and incentivizing new ways to access multidisciplinary, high-quality care.
Mental health	State agencies, professional associations and hospital systems should consider promoting trainings and standardized referral pathways to address the tremendous need for maternal mental health services. Women with lower acuity mental health issues should be managed by their primary or obstetric care provider. Women with higher acuity needs should be referred for behavioral health care in a timely manner.
Respectful maternity care	Providers should consider receiving ongoing training and supports to enhance their skill in effective patient communication and shared decision making in keeping with the highest standards of respectful maternity care.
Social determinants of health	Nursing and medical staff should consider being trained in taking a detailed psychosocial history in keeping with the social determinants of health (SDOH) framework. Ongoing training is also important to keep staff aware of ways to make referrals and the current array of resources and programs available in Delaware to support SDOH needs.

Figure F4


Addressing perinatal mood and anxiety
Examples of strengths from FIMR cases, 2022
• 43% of FIMR mothers had a history of a mental health condition.
• 45% experience depression or some other mental health condtion in the postpartum period.
• FIMR cases demonstrate some strengths in how providers can support women in caring for their perinatal mood and anxiety issues through the different stages of the perinatal journey.
The mother is screened for depression and anxiety using a validated tool such as the Edinburgh Postpartum Depression Scale at her first prenatal visit.
If she screens positive for depression, the provider follows up with further discussion. A referral is initiated for mental health resources--such as a social worker or therapist--in the clinic or the community.
Prenatal Care
The provider and the mother discuss the need for medication, such as an antidepressant, to treat her symptoms. The mother is reassured there are many safe and effective options for treatment during pregnancy.
Delivery
The mother is seen by a behavioral health provider, a case manager and/or a nurse navigator in the hospital postpartum to consult for mental health and bereavement support resources.
The mother and provider discuss her loss at the postpartum visit. The provider discusses the implications of this loss for future pregnancies. A depression and anxiety screen is repeated.
Postpartum Care
The provider offers counseling, referrals and medication management based on the results of the screen. A follow up appointment is made to check in with the mother and see how she is doing.

Maternal Mortality Review

2022 Data and Findings

Delaware's Maternal Mortality Review (MMR) is statutorily mandated to review all pregnancy associated deaths occurring among Delaware residents. The Delaware MMR is supported by an Enhancing Reviews and Surveillance to Eliminate Maternal Mortality (ERASE MM) grant from the CDC and conducts reviews based on the CDC guidance to allow for greatest comparability between states and national data. In 2022 the MMR Committee reviewed eleven cases of pregnancy associated deaths occurring between the years 2018 and 2022. Five women who died were Black, four were White and two were Hispanic. The women were all over the age of 30 years, and ten were residents of New Castle County. Four deaths occurred while the woman was still pregnant, two occurred on the day of delivery or up to 42 days postpartum, and five deaths were late postpartum, occurring between 43 and 365 days after the end of pregnancy. Family interviews were available for two cases, offering valuable insights into the woman's life and experiences.

Definitions

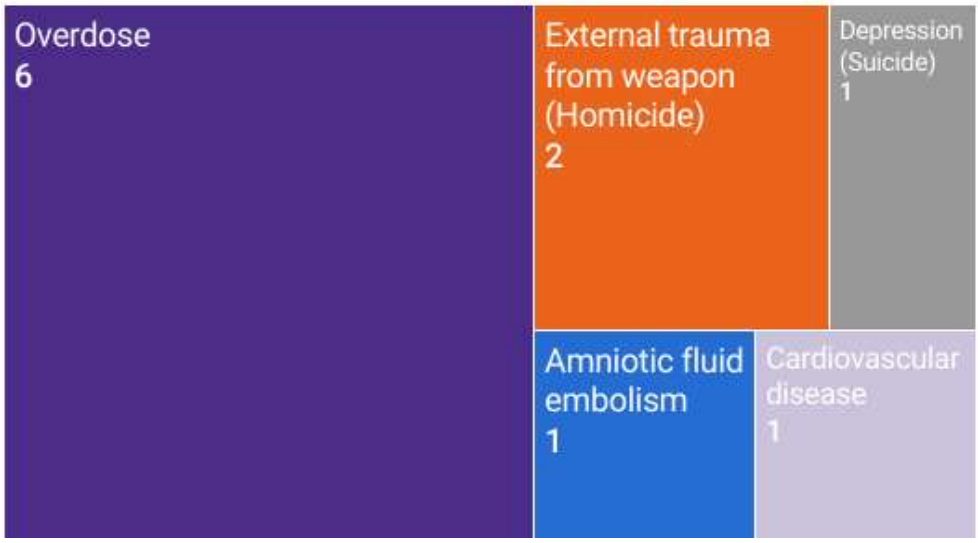
Pregnancy associated death – The death of a person while pregnant or up to one year after the end of the pregnancy, irrespective of cause.

Pregnancy related death – The death of a person while pregnant or up to one year after the end of the pregnancy from a cause linked back to their being pregnant.

Figure M1 shows the underlying causes of death in the 2022 MMR cases. Two deaths were determined to be pregnancy related, meaning that the woman's death was likely causally related to her being pregnant. The MMR Committee determined nine of the eleven deaths to be potentially preventable, defined as "at least some chance of the death being averted by one or more reasonable changes to patient, family, provider, facility and/or community factors."[12] The pregnancy outcome in six cases was a live birth. Three cases resulted in a fetal death (stillbirth) after 20 weeks gestation, and two of these were also counted as FIMR cases. For more details about the cases reviewed, see the 2022 MCDRC Annual Report data addendum.

[12] CDC. Committee Decision Form v21. Maternal Mortality Review Information Application (MMRIA).

Figure M1: Underlying causes of death (manner) in 2022 MMR cases



The MMR Committee identifies factors at the patient or family, provider, facility, system, and community levels that may have contributed to the death. Figure M2 shows the number and level of the contributing factors identified in the 11 cases reviewed. There were 95 contributing factors identified overall for an average of nine contributing factors identified per case. Table M1 lists the top contributing factors in each level.

Figure M2: Number of contributing factors identified in MMR cases by level (n=95)

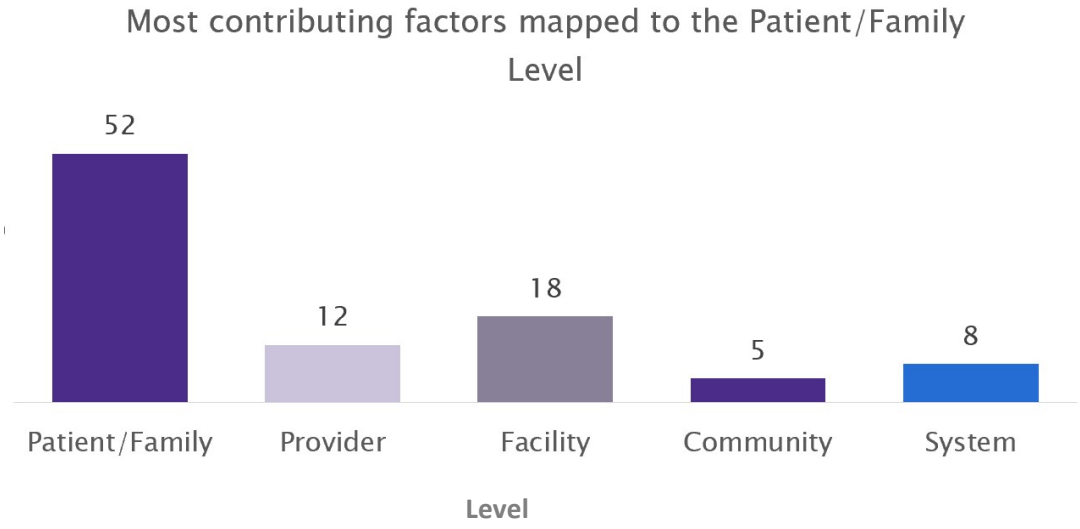


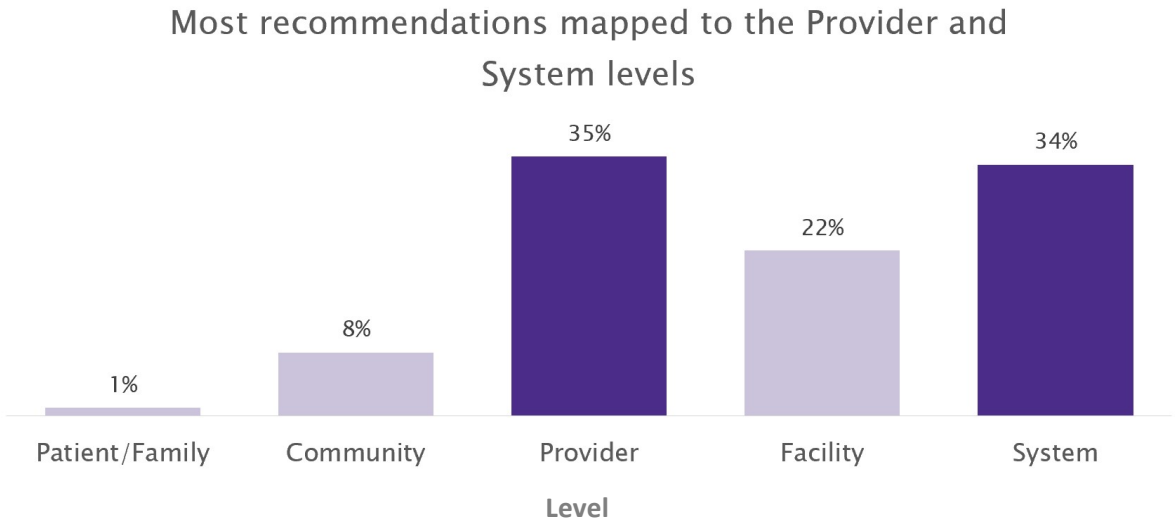
Table M1: Type of contributing factors most commonly identified by level

Level	Most common contributing factors identified (n=number of cases)
Patient/Family	Mental health (8), Trauma (7), Substance Use Disorder (SUD) (6), Lack of social support/isolation (5), Violence (5)
Provider	Knowledge (4), Clinical skill/quality of care (3)
Facility	Assessment (3), Clinical skill/quality of care (3), Communication (3), Referral (3)
System	Access/financial (1), Communication (1), Delay (1), Mental health (1), SUD (1)
Community	Environmental (2), Referral (1), Structural racism (1), SUD (1)

For the contributing factor definitions used per CDC guidance see page 4 of the MMRIA Committee Decision Form available on the reviewtoaction.org website.

Per the CDC guidance, the MMR Committee should identify a recommendation for each identified risk factor. The past year 2022 was the first time the Delaware MMR program met this standard. Ninety-five potential recommendations were identified by the Committee and MMR staff. Figure M3 shows the level of the recommendations drafted. Most recommendations fell into the provider and system levels, and these recommendations often addressed the need for providers to more routinely screen, refer and treat mental health conditions and substance use disorder (SUD) in a trauma informed manner (see Figure M4).

Figure M3: Percent of potential recommendations identified in MMR cases by level (n=95)



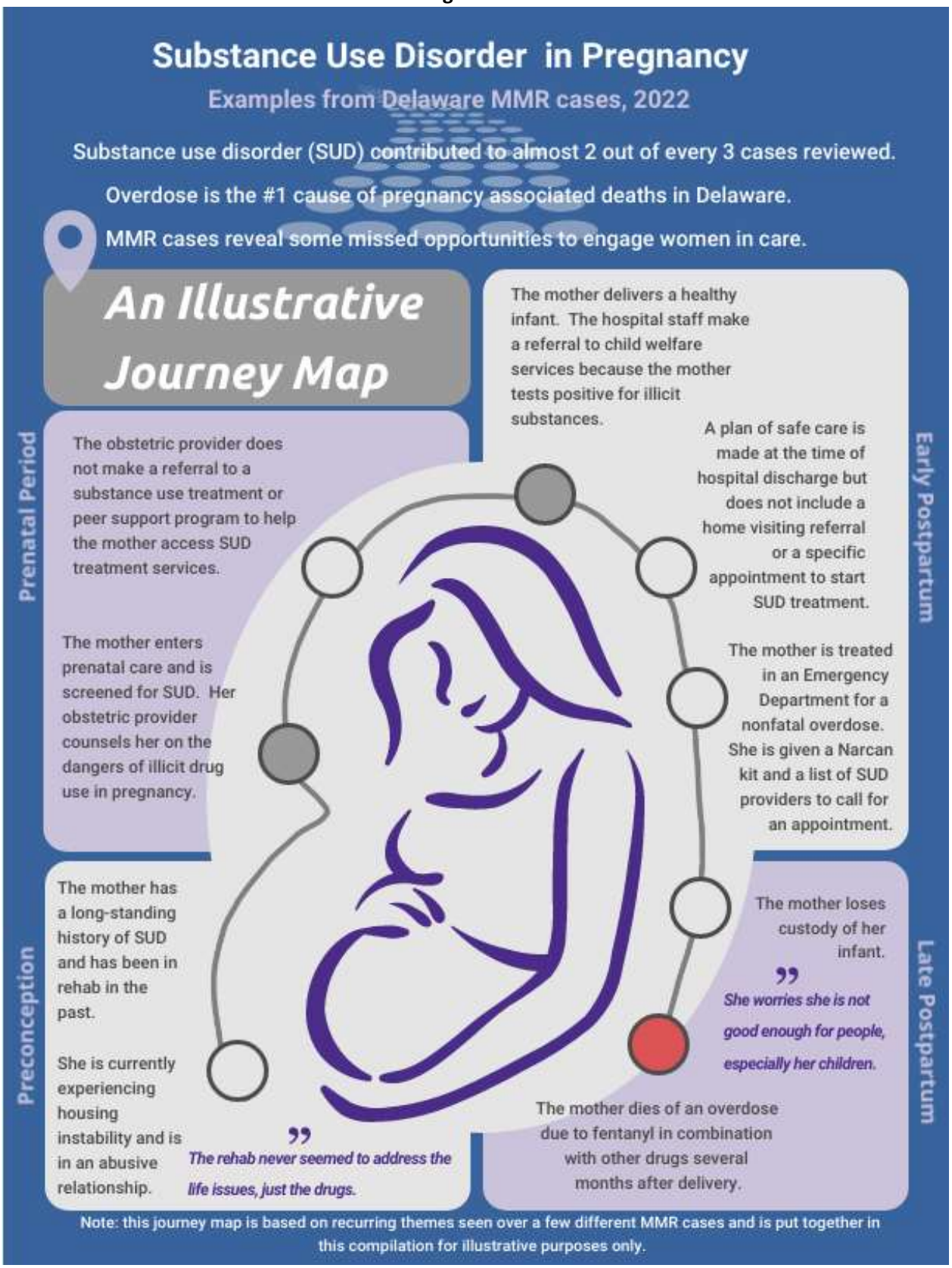
Since the number of potential recommendations was large (n=95), the MMR staff invited Committee members to participate in a survey to prioritize the recommendations. The 95 potential recommendations were grouped by theme into 20 categories, and Committee members were asked to rank the recommendations within each category. Nineteen Committee members responded to the survey for a 39% response rate. Seven recommendations received over 60% of the member vote for the top priority in their respective category. Table M2 lists the priority recommendations identified.

Table M2: Priority recommendations identified by the MMR Committee members

Category	Priority recommendations identified by the MMR Committee
Access to services	Mental health and SUD services should be available to all residents. Crisis intervention services should be made available with adequate resources to fully staff and support the implementation of the 988 call line in Delaware, including adequate public education to make people aware of the call line's purpose and function.
Provider knowledge on SUD	DSAMH and professional organizations will offer ongoing trainings for providers on SUD to enhance empathy and true understanding of the condition as a treatable, chronic brain disease and thereby decreasing tolerance for discriminatory actions against patients suffering from the condition.
SUD	Mental health and SUD services should be available to all state residents.
Provider knowledge on mental health	DSAMH should offer resources to healthcare providers describing available mental health supports during pregnancy and postpartum, specifically addressing concerns about social isolation and telemedicine therapies.
Quality of services in the community	Communities should communicate services available to individuals experiencing interpersonal violence (IPV). More emergency funds should be made available to victims of IPV to use to enact a safety plan.
Provider knowledge on obstetric care	Labor and delivery staff should be regularly trained on responding to obstetric emergencies in a coordinated team approach.
Social determinants of health	Hospitals should screen women for and document social risk factors as well as a medical home. Patients who are at high risk for medical and/or social complications could be given high priority for case management services while admitted, helping engage the patient and identify her most pressing needs and opportunities to help.

DSAMH=The Division of Substance Abuse and Mental Health

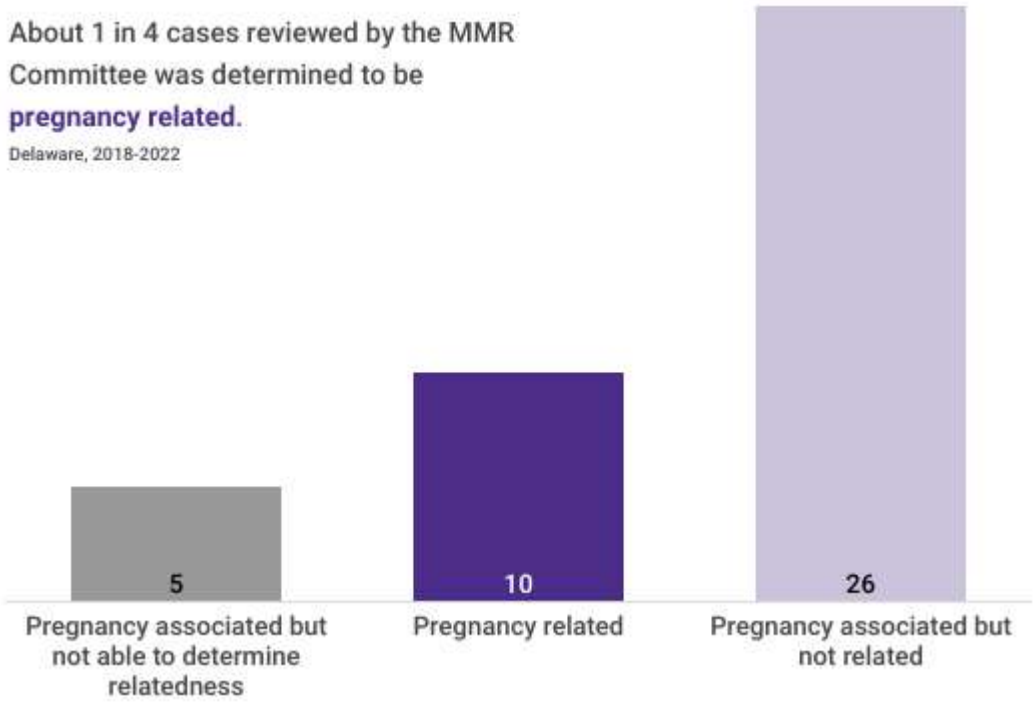
Figure M4


Substance Use Disorder in Pregnancy
Examples from Delaware MMR cases, 2022
Substance use disorder (SUD) contributed to almost 2 out of every 3 cases reviewed.
Overdose is the #1 cause of pregnancy associated deaths in Delaware.
MMR cases reveal some missed opportunities to engage women in care.
An Illustrative Journey Map
Preconception
Prenatal Period
Early Postpartum
Late Postpartum
The mother has a long-standing history of SUD and has been in rehab in the past.
She is currently experiencing housing instability and is in an abusive relationship.
"The rehab never seemed to address the life issues, just the drugs."
The obstetric provider does not make a referral to a substance use treatment or peer support program to help the mother access SUD treatment services.
The mother enters prenatal care and is screened for SUD. Her obstetric provider counsels her on the dangers of illicit drug use in pregnancy.
The mother delivers a healthy infant. The hospital staff make a referral to child welfare services because the mother tests positive for illicit substances.
A plan of safe care is made at the time of hospital discharge but does not include a home visiting referral or a specific appointment to start SUD treatment.
The mother is treated in an Emergency Department for a nonfatal overdose. She is given a Narcan kit and a list of SUD providers to call for an appointment.
The mother loses custody of her infant.
"She worries she is not good enough for people, especially her children."
The mother dies of an overdose due to fentanyl in combination with other drugs several months after delivery.
Note: this journey map is based on recurring themes seen over a few different MMR cases and is put together in this compilation for illustrative purposes only.

Maternal Mortality Review: 2018-2022 Five-year Analysis

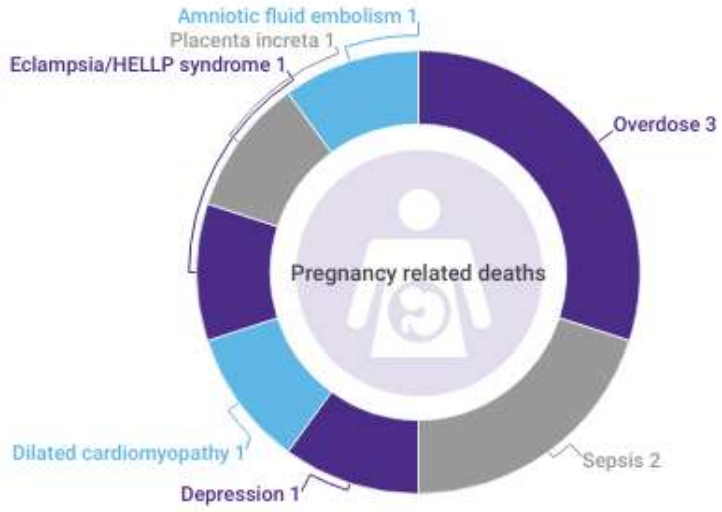
Delaware has about 10,000 live births annually and 5-10 pregnancy associated deaths per year. A five-year compilation of MMR data allows more cases to be considered when reporting out key findings from the reviews. Between 2018 and 2022, the MMR Committee reviewed 41 pregnancy associated cases. They determined that ten cases (24%) were pregnancy related, meaning the woman's death was causally linked to her pregnancy (Figure M5). Twenty-six cases (63%) were pregnancy associated but not related (PANR), that is the cause of death was not related to the person's being pregnant, and pregnancy relation was unable to be determined (UTD) in 5 cases.

Figure M5: Pregnancy relation for cases reviewed 2018-2022



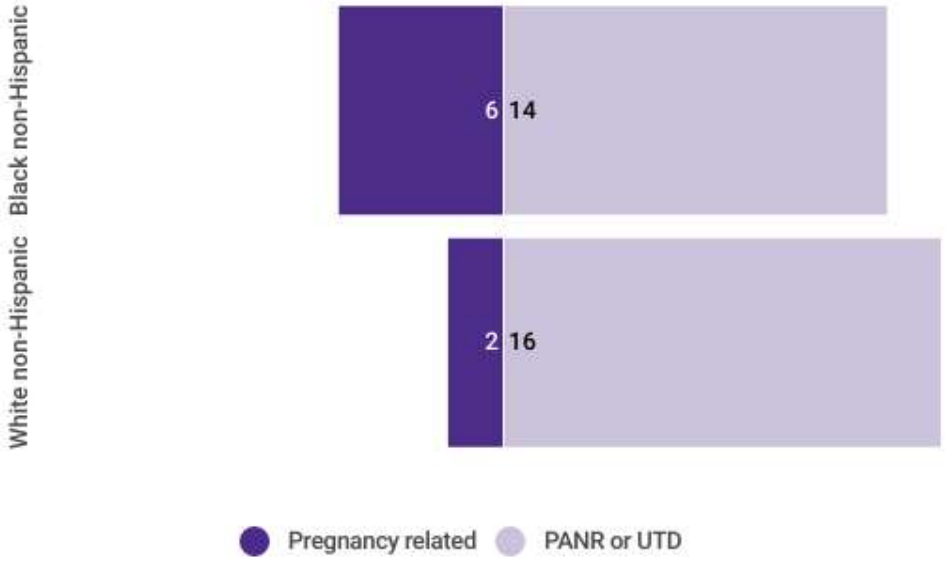
The underlying cause of death in pregnancy related cases vary. Most causes are related to obstetric complications. There were three cases were the woman died of an overdose and the MMR Committee felt the circumstances of the death were related to her having been pregnant. Figure M6 shows the cause of death in the ten pregnancy related cases reviewed in the last five years.

Figure M6: Underlying cause of pregnancy related deaths reviewed (n=10 total)



Black non-Hispanic women were disproportionately represented in the MMR cases, particularly among pregnancy related cases. Almost half of the cases reviewed in the last five years (49%) were deaths occurring to Black women, this is a higher proportion than expected based on the fact that they made up only 28% of the women giving birth in Delaware in 2020.[13] Black women made up six of the ten pregnancy related cases (60%) and 45% of the PANR and UTD deaths combined (Figure M7). White non-Hispanic women made up 20% of the pregnancy related cases reviewed and 52% of the PANR and UTD cases.

Figure M7: The number of MMR cases by pregnancy relation and race/ethnicity



[13] Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center. Delaware Vital Statistics Annual Report 2020.

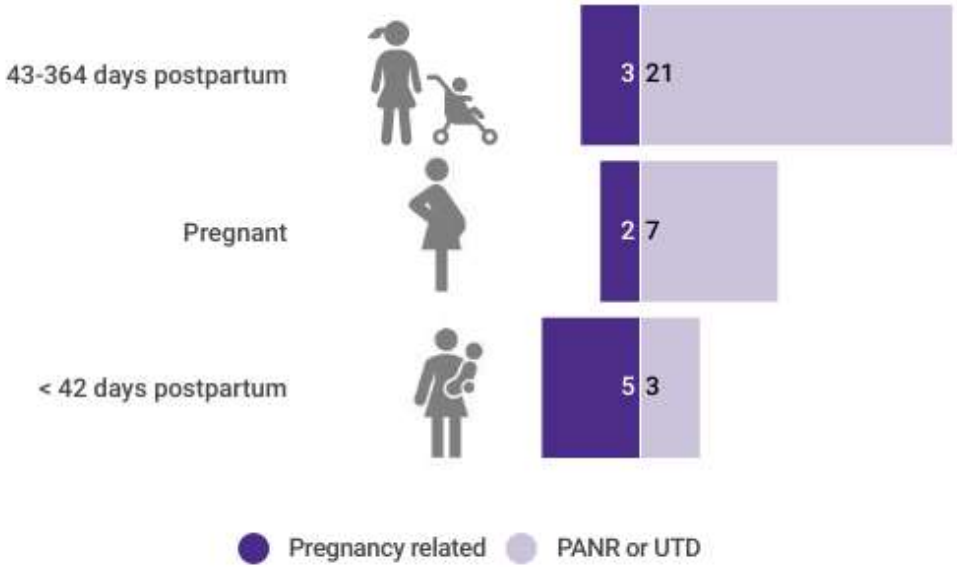
Note: Three cases involving women of Hispanic or other racial backgrounds are not shown here due to their small numbers.

The MMR Committee considers the preventability of each case as part of the review process. In 34 of the 41 cases (83%), the committee deemed that there was some chance of averting the outcome (Figure M8). Among pregnancy related cases, 90% were considered potentially preventable.

Figure M8: Preventability as determined by the MMR Committee

Timing of death varies by pregnancy relation. More pregnancy related deaths occurred on the day of delivery or in the first six weeks postpartum (Figure M9). In contrast, a larger proportion of the PANR or UTD cases (68%) involved deaths that occurred in the late postpartum period, up to one year after the end of the pregnancy.

Figure M9: Timing of death by pregnancy relation



The MMR Committee considers four key factors as part of the case deliberation process. Based on guidance from the CDC, these factors are obesity, discrimination, mental health, and SUD. The MMR Committee must determine if any factor(s) contributed to the death. Figure M10 shows the proportion of cases where an individual factor was definitely or probably determined to be contributory. There are notable intersections among risk factors, namely the co-occurrence of mental health and SUD as contributing factors in almost half of all cases reviewed (20 out of 41, or 49%). This preponderance of co-occurring mental health and SUD bears testimony to the most common cause of pregnancy

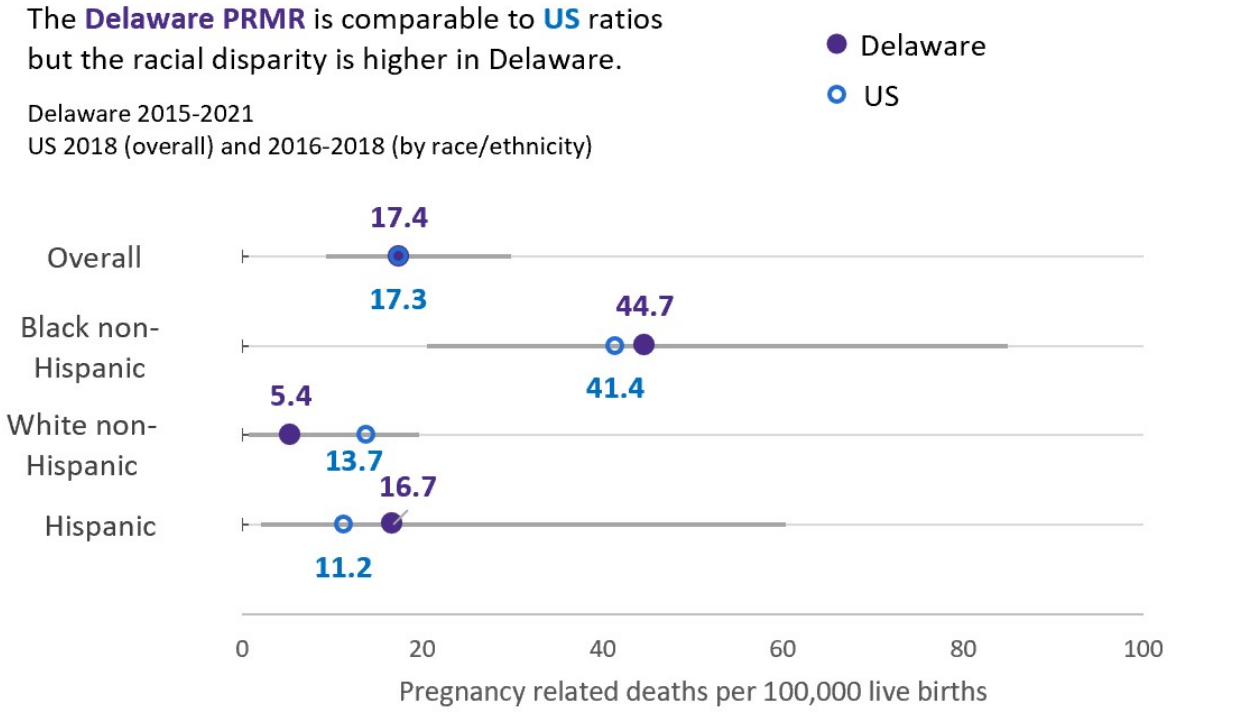
associated deaths seen in Delaware over the last five years being drug overdose and the high burden of these behavioral health issues in persons at risk of maternal mortality.

Figure M10: Contributing factors identified in cases by pregnancy relation

Note: This graph represents the proportion of cases that have each checkbox factor marked as "Yes" or "Probably" present and contributing to the death.

The pregnancy related mortality ratio (PRMR) is a key statistic reported by the CDC based on national data. PRMR is defined as the number of pregnancy related deaths per 100,000 live births. Figure M11 shows the PRMR for Delaware compared to the US. Delaware MMR data on pregnancy relatedness underpins the calculation of the state PRMR. Overall, the Delaware ratio of 17.4 is on par with the national ratio of 17.3. The PRMR by race/ethnicity is not statistically different between Delaware and the US overall, as shown by the fact that the US estimates all fall within the 95% confidence intervals for the corresponding Delaware ratio. However, the Delaware ratio for Black non-Hispanic women of 44.7 pregnancy related deaths per 100,000 live births is statistically higher than the state's White non-Hispanic ratio of 5.4.

Figure M11: The Delaware and US Pregnancy Related Mortality Ratio (PRMR) by race/ethnicity



Note: Some race/ethnicity categories are not reported due to small numbers and unstable ratios.
95% confidence intervals for the Delaware PRMR is shown by the darker gray lines.
Source: Delaware Maternal Child Death Review Commission and CDC Pregnancy Mortality Surveillace System

Conclusion

The work of the MCDRC depends on partnerships with many stakeholders situated in different settings and levels of the health and social systems of care. Through these joint efforts, the Commission has come a long way in developing a more holistic framework to consider case reviews from multiple perspectives. Even then, fatality review data is incomplete and cannot do full justice to the lived experiences and untimely losses of mothers, infants, and children in Delaware. The MCDRC is working to expand its implementation and outreach to add a community action team to interpret the findings and recommendations coming out of its fatality review programs. It will take having a variety of partners representing the most impacted communities to identify and implement actions that can galvanize change. Maternal and child health stakeholders also have to concurrently look more upstream to structural, policy, reimbursement and legislative changes that can facilitate the conditions for more equity and opportunity in Delaware's most at-risk communities.

Commissioners and Review Panel Members

Maternal and Child Death Review Commission

Role	Designee
Department of Justice	Annmarie Puit
State Police	Corporal Andrea Warfel
Delaware Medicaid and Medical Assistance	vacant
Department of Services for Children, Youth and their Families	Trenee Parker
Department of Education	Cassandra Codes-Johnson
Office of the Child Advocate	Tania Culley
Division of Substance Abuse and Mental Health	Mary Wise
Office of the Medical Examiner	Gary Collins
Division of Public Health	Mawuna Gardesey
SDY Panel Chair	Mary Ann Crosley
SDY Advanced Panel Chair and Pediatrician	Amanda Kay
CDR Panel Chair and OB/GYN	Philip Shlossman
FIMR New Castle Chair	Aleks Casper
FIMR Kent/Sussex Chair	Bridget Buckaloo
MMR Chair and Perinatologist	Garrett Colmorgen
Neonatologist	David Paul
Delaware Nurses Association	Nancy Forsyth
Licensed Mental Health Professional	Fran Franklin
Police Chiefs Council	Chief Laura Giles
New Castle County Police Department	Lt. Mike Bradshaw
Child Advocate, non-profit	Patti Dailey-Lewis
Maternal Advocate, non-profit	Doris Griffin
Certified Nurse Midwife	Michelle Drew

CDR Panel Members
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Angela Birney
Kevin Bristowe, MD
Ann Covey, BSN, RN, NCSN
Lt. Aaron Dickinson (Dover PD)
Lt. Robert Roswell (Dover PD)
Philip Shlossman, MD, Chair
Cpt. Darren Short (DSP)
Tina Ware, MM/PA
Lt. Dwight Young (Milford PD)

SDY MDT/First Level Panel Members
Olufolake Remi Adepoju, APRN, DNP
Angela Birney
Mary Ann Crosley, RN, Chair
Greer Firestone
Sgt. Hector Garcia (NCC PD)
Sgt. John Jefferson (DSP)
Stewart Krug
Det. Ron Mullin (Wilmington PD)
Tina Ware, MM/PA

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Ember Crevar, MD
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Aisha Frazier, MD
Karen Gripp, MD
Amanda Kay, MD, Chair
Bradley Robinson, MD
Joel Temple, MD
Takeshi Tsuda, MD

FIMR New Castle County
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Mychal Anderson-Thomas
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