

Texas Addresses Maternal Mortality and Morbidity

Texas established a multidisciplinary [Maternal Mortality and Morbidity Task Force](#) (MMMTF) to reduce maternal mortality and severe morbidity. The MMMTF is part of a wide range of efforts in Texas to improve the health of mothers and babies in the state. The MMMTF was established in [statute](#) in 2013 to review cases of pregnancy-related deaths and severe maternal morbidity, identify trends and disparities, review best practices, and make recommendations to reduce the incidence of pregnancy-related deaths and severe maternal morbidity.^{1,2,3}

The Texas Department of State Health Services (DSHS) leverages Title V funding to support the MMMTF and uses the data, infrastructure, and recommendations of the MMMTF to improve the reach and effectiveness of Title V and other state and federal programs related to maternal and infant health. The MMMTF is part of larger state efforts, involving both state agencies and other partners, focused on maternal health and safety.

Steps Taken:

- In 2013, the Texas state legislature passed [Senate Bill 495](#) creating the MMMTF. Importantly, the legislation establishing the MMMTF was drafted with input from both DSHS and physician stakeholders to ensure that the policy would be evidence-based and would have maximum impact.
- The MMMTF was established as a 15-member multidisciplinary group, including the following representation: physicians specializing in obstetrics, maternal fetal medicine, pathology, psychiatry, and family medicine, a representative from DSHS, a community advocate, a registered nurse, a certified nurse midwife, a researcher of pregnancy-related deaths, a social worker, a medical examiner, and the Texas state epidemiologist. Members are appointed by the commissioner of DSHS and volunteer their time to participate. For many members, the MMMTF marked the first opportunity to collaborate with peers across disciplines to address maternal mortality in the state.
- The MMMTF's initial responsibilities were to select and review a cross section of pregnancy-related deaths, analyze severe maternal morbidity, identify trends, and issue recommendations to reduce maternal mortality and morbidity.
- During its initial round of work, the MMMTF developed the infrastructure, policies, processes, data tools, and partnerships necessary for the successful review of maternal mortality and morbidity.⁴

- From 2010 to 2011, maternal mortality in Texas increased significantly—by either 77 percent or 25 percent, depending on the data source and methodology.⁴
- Persistent racial disparities exist in maternal mortality. Though only 11.4 percent of all births in Texas were to black women, they accounted for 28.8 percent of all maternal deaths.⁶
- The [2018 Legislative Report](#), released by DSHS, confirms that most maternal deaths are preventable. This report will help guide new postpartum medical practices in Texas.
- The MMMTF found that the four leading causes of maternal deaths, accounting for 76 percent of all pregnancy-related deaths in 2012, were:
 - Cardiovascular and coronary conditions.
 - Obstetric hemorrhage.
 - Infection or sepsis.
 - Cardiomyopathy.
- Review of death certificate narrative showed that more than half (58%) of drug overdose deaths involved licit or in combination with other drugs.

- [Senate Bill 17](#) was passed to extend the life of the MMMTF and expand its membership, adding a critical care physician and a nurse specializing in labor and delivery. The MMMTF was also charged with several new duties, including exploring best practices from states to decrease maternal death rates, looking at the impact of health disparities and socioeconomic status on maternal death, making recommendations specifically related to domestic violence, mental health, and substance use for pregnant and postpartum women, as well as studying how the state can implement a maternal health and safety initiative focused on best practices for healthcare providers.
- A 2017 [legislative brief](#) from DSHS examines the timing of all confirmed maternal deaths within the state over a year. These deaths are broken down into multiple timing categories and have been utilized to look more closely at deaths occurring within seven days postpartum to identify areas of prevention during the initial hospital stay.
- The MMMTF collaborates with other state programs focused on improving maternal and child health and reducing infant mortality, including:
 - [Healthy Texas Mothers and Babies](#) – a data-driven DSHS initiative developed to improve maternal and infant health by advancing quality and evidence-based prevention for all Texas mothers and babies.
 - [Healthy Texas Women](#) – a state program offering comprehensive healthcare and family planning services for women.
 - [Texas Collaborative for Healthy Mothers and Babies](#) – the state’s perinatal quality collaborative focused on improving birth outcomes.
- During its review of maternal mortality and morbidity for deaths occurring during 2011-12, the MMMTF made the following key findings:
 - Black women have the greatest risk for maternal death. Although they account for only 11.4 percent of all births in Texas, black women accounted for 28.8 percent of all maternal deaths.⁵ Racial disparities were also identified in the severe maternal morbidity (SMM) data, with black women much more likely to experience SMM during a pregnancy-related hospitalization compared to women of other races and ethnicities.⁶ Racial disparities in infant mortality also persist, with rates of infant death among black mothers twice as high as those among white and Hispanic mothers.⁷
 - Mental health and substance use disorders played a significant role in maternal deaths. Drug overdose emerged as the second leading cause of maternal death (11.6%), with the majority caused by licit or illicit opioids.⁸ Maternal mental and behavioral health issues contribute to severe maternal morbidity and can lead to neonatal abstinence syndrome, which has been linked to poor outcomes for newborns. Rates of neonatal abstinence syndrome (NAS) in Texas increased almost 60 percent from 2010 to 2015.⁹ The MMMTF discovered missed opportunities to screen women for mental and behavioral health issues and opportunities to refer them to treatment.
 - Survival plots developed through data linkages showed that women remain at risk throughout the entire year after their pregnancy, with almost 60 percent of maternal deaths occurring 42 days post-delivery. The MMMTF speculated that this could be due to a lack of access to care and continuity experienced by women during this time period.¹⁰
- DSHS recently completed a timeline analysis of maternal deaths using data from 2012 to 2015 to complement the work of the MMMTF and allow them to further hone their recommendations. Key findings from this analysis include:
 - The majority of maternal deaths (79%) happened more than seven days postpartum and are most often caused by drug overdose, cardiac events, homicide, and suicide.

- The 21 percent of maternal deaths that occur during pregnancy or within seven days postpartum are most frequently caused by hemorrhage, cardiac events, and amniotic embolism.¹¹

Results:

- The MMMTF's work has been extended until 2023. In addition, its responsibilities and membership have been expanded to include a nurse specializing in labor and delivery and a physician specializing in critical care.
- The MMMTF recommended increasing provider and community awareness of health disparities and implementing programs that increase the ability of women to self-advocate. DSHS is responding to this recommendation by leveraging Title V funding to increase provider and community awareness about the role of racial disparities in both maternal and infant morbidity and mortality through provider education, bilingual education campaigns, a preconception peer education program, local perinatal coalitions, and support of the [Texas Collaborative for Healthy Mothers and Babies](#).
- In response to the MMMTF findings on maternal opioid use and recommendations to increase screening and referral, funding was provided for 2016-2017 to prevent NAS in infants. The resulting [NAS Prevention Pilot](#) seeks to enhance screening and outreach and improve access to intervention and treatment. In addition, Senate Bill 17 extending and expanding the MMMTF requires the state's health and human services commission, in conjunction with the MMMTF, to make screening tools and resources related to substance use and mental health available to providers who work with pregnant women.
- The MMMTF recommended increasing access to health services during the entire year after delivery and throughout the interconception period to improve continuity of care, enable effective care transitions, promote safe birth spacing, and reduce maternal morbidity. The new [Healthy Texas Women](#) program has since implemented policies to allow women to access services for a full year post-delivery. The program has also added an improved benefit package, including family planning, screening and treatment for hypertension and diabetes, as well as screening for postpartum depression. They have streamlined Medicaid enrollment and added extensive outreach with the goal of improving preconception and interconception care, which are strategies that can reduce both maternal mortality and morbidity and infant mortality.
- DSHS epidemiologists used an enhanced method to more accurately identify maternal deaths and estimate the Texas maternal mortality rate for 2012, which was the year with the highest reported rate. Research results, [published](#) in *Obstetrics & Gynecology*, show that the number and rate of maternal deaths in Texas for 2012 are less than half of those previously reported. Incorrect pregnancy status on death certificates contributed to the higher original maternal mortality rate. Even though results indicated far fewer maternal deaths in 2012, maternal mortality and severe maternal morbidity remain a public health priority in Texas.
- DSHS is now leading the statewide effort, [TexasAIM](#), to participate in the [Alliance for Innovation on Maternal Health](#), a national initiative to address maternal mortality and reduce severe maternal morbidity by implementing safety bundles and practices at hospitals. TexasAIM engages healthcare leaders, hospital systems, and quality improvement teams to carry out maternal safety projects. They are beginning with the obstetric hemorrhage bundle and will also implement severe hypertension in pregnancy and obstetric care for women with opioid use disorder bundles as part of the TexasAIM initiative. As of August 2018, 186 of the 238 birthing hospitals in the state have enrolled in TexasAIM.

Lessons Learned:

- Members of the MMMTF volunteer their time because they are committed to their work on this issue and view the task force as a unique opportunity to participate in a collaborative and multidisciplinary process. However, the MMMTF requires dedicated staffing resources and infrastructure to continue and expand the review and recommendation processes.
- Strong partnerships with hospitals and successful collaborative quality improvement experiences cultivated through the [DSHS Texas Breastfeeding Learning Collaborative](#) have helped hospital engagement and recruitment. Partnering with the Texas Hospital Association and the Texas Collaborative for Health Mothers and Babies builds a strong foundation for the program and will be instrumental in the program's success.
- States can leverage Title V funds to translate maternal mortality review recommendations into action by collaborating strategically with other efforts focused on maternal and infant health to align efforts for prevention.
- The data analysis and review processes undertaken by TX DSHS and the MMMTF have emphasized that maternal mortality and morbidity are complex issues that will require a variety of preventative efforts.

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¹ [Senate Bill 495, 83rd Legislature, Regular Session, 2013](#). "Relating to the creation of a task force to study maternal mortality and severe maternal morbidity." Available at <https://capitol.texas.gov/tlodocs/83R/billtext/html/SB00495F.htm>. Accessed 5-16-2018.

² Texas Senate Bill 17, 85th Legislature, First Special Session, 2017. "Relating to maternal health and safety, pregnancy-related deaths, and maternal morbidity, including postpartum depression." Available at <https://capitol.texas.gov/tlodocs/851/billtext/html/SB00017F.htm>. Accessed 5-6-2018.

³ Texas Health and Safety Code Title 2, Subtitle B, Chapter 34. Maternal Mortality and Morbidity Task Force. Available at: <http://www.statutes.legis.state.tx.us/Docs/HS/htm/HS.34.htm>. Accessed 4-16-2018.

⁴ Texas Department of State Health Services. "Maternal Mortality and Morbidity Task Force Report, September 2014." Available at: https://www.dshs.texas.gov/mch/maternal_mortality_and_morbidity.shtm. Accessed 5-16-2018.

⁵ Texas Department of State Health Services. "Maternal Mortality and Morbidity Task Force and Department of State Health Services Joint Biennial Report." Available at: https://www.dshs.texas.gov/mch/maternal_mortality_and_morbidity.shtm. Accessed 3-29-2018.

⁶ *Ibid.*

⁷ Kormondy M, Archer N. *2016 Healthy Texas Babies Data Book*. Austin, TX: Division for Family and Community Health Services, Texas Department of State Health Services, 2016. Available at http://www.dshs.texas.gov/healthytexasbabies/Documents/HTBDatabook_2016.pdf. Accessed 3-29-2018.

⁸ Texas Department of State Health Services. “Maternal Mortality and Morbidity Task Force and Department of State Health Services Joint Biennial Report, July 2016.” Available at https://www.dshs.texas.gov/mch/maternal_mortality_and_morbidity.shtm. Accessed 3-29-2018.

⁹ Cleveland L, Paradise K, et al. *The Mommies Toolkit: Improving Outcomes for Families Impacted by Neonatal Abstinence Syndrome*. Austin, TX: Texas Department of State Health Services, 2015. Available at http://www.dshs.texas.gov/sa/NAS/Mommies_Toolkit.pdf. Accessed 3-29-2018.

¹⁰ Texas Department of State Health Services. “Maternal Mortality and Morbidity Task Force and Department of State Health Services Joint Biennial Report, July 2016.” Available at https://www.dshs.texas.gov/mch/maternal_mortality_and_morbidity.shtm. Accessed 3-29-2018.

¹¹ Texas Department of State Health Services. “Maternal Mortality and Morbidity Task Force and Department of State Health Services Joint Biennial Report, September 2018.” Available at https://www.dshs.texas.gov/mch/maternal_mortality_and_morbidity.shtm. Accessed 9-06-2018.