

Improving Maternal Health and Preventing Maternal Mortality A PUBLIC HEALTH COMMITMENT

Overview

In Texas, as in the nation, maternal mortality has increased during the past decade. The increase is partly associated with the rise in comorbid conditions that complicate pregnancy, such as obesity, Type II diabetes, and hypertension, with smoking further increasing the risk for maternal death. Black women bear the greatest risk for maternal mortality. Among the leading causes of maternal death with the greatest chances of being prevented are obstetric hemorrhage and pregnancy-induced hypertension.

At the Department of State Health Services (DSHS), the Title V Maternal and Child Health (MCH) Program is dedicated to improving maternal health and preventing maternal mortality using its established public health leadership, expertise, experience, and infrastructure. The MCH Block Grant Program is the nation's oldest federal-state public health partnership aimed at improving the health and well-being of mothers and children. At DSHS, Title V MCH receives annual funding of \$33.9 million from the U.S. Health Resources and Services Administration, and \$40.2 million state General Revenue as maintenance of effort.

Public health is about strategies that *prevent* disease and death from occurring. Public health prevention prolongs and saves lives. In a sense, public health is the hypertension that never developed, the obstetric hemorrhage that did not happen, and the maternal death that never occurred.

The public health strategies employed by DSHS Title V MCH to improve maternal health and prevent maternal death include:

- **Assessment** — identifying and defining maternal health problems, and associated risk and protective factors.
- **Program Development** — developing population-based prevention initiatives to improve maternal health outcomes by decreasing related risk factors and increasing related protective factors.
- **Evaluation** — measuring the effectiveness of developed initiatives.
- **Collaboration** — partnering to advance strategies with state and national agencies and organizations.

Assessment

- **Maternal Mortality and Morbidity Task Force** — beginning its work in late 2014 with administrative and epidemiologic support by DSHS, the multidisciplinary Task Force studies and reviews maternal death cases and statewide data trends, as well as makes recommendations impacting maternal mortality in Texas.
 - **Statutory Authority:** Health and Safety Code, Chapter 34.
 - **Outcomes:** Two joint DSHS-Task Force legislative reports; statewide data trending; 50 percent of maternal death cases for 2012 reviewed (year with highest MMR to date).

- ***Timeframe & Action Plan: STATEWIDE DATA TRENDS***
 - DSHS is conducting surveillance and hotspot analyses on confirmed maternal deaths to develop further strategies and enhance existing ones. The main focus is on cause and timing of death, as well as geographic and socioeconomic characteristics of affected mothers. These statewide data trends for confirmed maternal deaths during 2012-2014 and will be presented to the Maternal Morbidity and Mortality Task Force at their quarterly meeting on September 29th, 2017.
- ***Timeframe & Action Plan: CASE REVIEWS***
 - Automating case record requests — recent addition of Research Specialist with a Ph.D. in computer science on May 24, 2017 (via waiver for hiring vacant position) allows DSHS to automate the process by which email and letters are generated and sent to hospitals requesting needed medical records for identifying maternal deaths. This process is currently all manual, and so diverts DSHS staff from the essential tasks of ensuring that Texas data on maternal death is processed and analyzed timely and accurately. Completion of the automation is expected by September 30, 2017.
 - Adopting and adapting case review data collection system — same Research Specialist will customize Centers for Disease Control and Prevention (CDC) data-enterable forms and create a corresponding database of cases reviewed by the Task Force for trending and reporting purposes, with a focus on pregnancy relatedness and preventability. The CDC system customized for Texas case review data collection is expected to be ready for testing and data entry of previously reviewed cases by January 1, 2018, with anticipated full online launch by spring 2018.
 - Sampling 50 percent of all maternal death cases for Task Force review annually — beginning with 2013 maternal deaths, DSHS will recommend that the Task Force review a random sample of cases for each year, instead of current 100 percent reviewed. This will allow more timely meaningful analysis of maternal death trends, which will speed up the Task Force’s ability to identify the most effective strategies for Task Force. The sampling approach will be amplified by the assistance of an Epidemiologist newly hired on May 15, 2017 who has over 10 years sampling experience (via waiver for hiring vacant position).
 - Contracting for medical case record redaction and abstraction — addition of two temporary staff since January 2017 has allowed DSHS to speed up redaction of medical records for an additional 31 maternal death cases occurring in 2012. This work continues to expedite case review process for 2012 maternal deaths, and DSHS expects that all maternal death case reviews for 2012 will be completed by March 2018. Also, DSHS has contracted with University of North Texas (UNT) for medical case record redaction and abstraction. Assuming UNT staff start redacting and abstracting calendar year 2013 maternal deaths in fall 2017 (after hiring staff, infrastructure set-up, and summer training) at an average of 8 cases reviewed per month out of an estimated random sample of 50 maternal death cases per year, by spring of 2019, DSHS will have a random sample of maternal death cases reviewed for calendar years 2013, 2014, and 2015, the latest calendar year with finalized death certificate data.

- **Pregnancy Risk Assessment Monitoring System (PRAMS)** — through a contract with Texas A&M University, DSHS administers a CDC-developed survey in which recent mothers are asked questions (via mail or telephone) about their health behaviors before, during, and after pregnancy. Topics covered include their access to prenatal care, pregnancy intention, alcohol use, smoking, knowledge of the importance of folic acid, multivitamin use, type of insurance, intimate partner violence, postpartum depression, breastfeeding, infant sleep position, and smoke exposure. Texas PRAMS epidemiologic surveillance data are used to drive and inform all maternal health programming at DSHS by providing a critical snapshot of the health of pregnant mothers, and what needs improvement. The PRAMS survey booklet tagline says it best: Women helping women have healthier pregnancies.
 - **Statutory Authority:** Health and Safety Code, Chapter 161.
 - **Outcomes:** DSHS Texas PRAMS annual data book and summary, dashboards, fact sheets, internal and external presentations, and DSHS Grand Rounds.
 - **Timeframe & Action Plan:**
 - Awaiting CDC approved 2015 PRAMS data in 2017 for 2015 DSHS Texas PRAMS annual data book and summary to be published by DSHS in 2017.
 - Monthly survey sampling of recent mothers ongoing.

Program Development

- **Strategic Plan for Maternal Health Programming** — listening sessions with DSHS public health partners will be conducted as part of a gap analysis to determine opportunities and barriers for improving preconception/interconception health and health care. Title V MCH will use findings from this analysis to develop a strategic plan for maternal health programming.
 - **Outcomes:** DSHS gap analysis and strategic plan report.
 - **Timeframe & Action Plan:**
 - Work to begin summer 2017 with assistance from two Masters of Public Health graduate student interns.
 - Completion of strategic plan report expected by spring 2018.

Texas Collaborative for Healthy Mothers and Babies (TCHMB) — through a Title V-funded contract with the University of Texas (UT), this perinatal quality collaborative advances health care quality and patient safety for mothers. In order to impact leading causes of maternal death with the greatest chances of being prevented, obstetric hemorrhage and pregnancy-induced hypertension, the TCHMB will be voting on implementing evidence-based maternal safety bundles within hospitals supported by the Alliance for Innovation on Maternal Health (AIM) to prevent obstetric hemorrhage and severe hypertension in October. These bundles or toolkits consist of instructions, checklists, and supplies for hospital staff to effectively prepare for, respond to, and prevent obstetric hemorrhage and severe hypertension in pregnancy.

- **Outcomes:** Expected reduction in severe maternal morbidity (unexpected severe complications resulting from labor and delivery).
- **Timeframe & Action Plan:**
 - DSHS is participating in initial discussions with UT on implementation of this initiative through the Obstetric Subcommittee of TCHMB.
 - Voting on implementation of the bundles will take place in Fall 2017.

- **Someday Starts Now** — a public health awareness campaign targeting women of childbearing age and their families that promotes the importance of pre- and inter-conception health, as well as healthy lifestyle behaviors to prevent chronic conditions known to adversely affect maternal health, including obesity, diabetes, hypertension, and smoking.
 - **Outcomes:** >90,000 website visits annually.
 - **Timeframe & Action Plan:**
 - Campaign to be updated beginning in July 2017 to: reflect current public health evidence and Texas priorities; utilize the most effective information, education and marketing with a digital-first approach; and to provide accurate, interactive and compelling content and tools for optimal impact on target populations.
 - New campaign strategy will incorporate and leverage complementary DSHS program efforts at the State, Regional and County levels, with a focus on messaging and outreach that engage the target audience as defined in addition to current and new stakeholders, leaders, and champions.
 - Outreach and marketing emphasis will be specifically geo-targeted to areas with a Healthy Texas Babies program presence.

- **Preconception Peer Educators Program** — a training program at historically Black colleges for women and men to promote preconception health and healthy lifestyle behaviors to prevent chronic conditions, such as obesity, diabetes, hypertension, and smoking that can result in pregnancy-related deaths. Additionally, the importance of family planning and the social determinants of health are also emphasized.
 - **Outcomes:** >100 students completing program annually.
 - **Timeframe & Action Plan:**
 - Strategic planning is underway to expand to other educational institutions, such as public state universities and community colleges.

- **Breastfeeding** — a multi-component program to increase the healthy practice of breastfeeding, known to reduce weight gain during pregnancy, thereby helping to prevent type 2 diabetes and other conditions making future pregnancies less risky for both mother and baby. DSHS continues to lead several public health initiatives that promote breastfeeding. For example, the Texas Ten Step program ensures education of hospital staff on the importance of breastfeeding and providing resources for breastfeeding mothers that they can use after their hospital stay. The Texas Mother-Friendly Worksite program is nationally recognized as a practice-tested obesity prevention initiative that provides resources to enable Texas businesses create an environment that encourages employees to breastfeed.
 - **Outcomes:** There are >2000 Texas Mother-Friendly Worksites throughout the state and TexasMotherFriendly.org has had more than 15,000 visits. The number of facilities designated as Texas Ten Step has almost doubled since 2010, increasing from 63 in 2010 to 124 facilities by the end of FY2016, and the number of Texas Baby-Friendly Hospitals more than tripled from 5 in 2010 to 18 by the end of FY2016. By the end of FY2016, more than 77% of Texas births occurred in a birthing facility with implemented Ten Step initiatives. There have been more than 12,000 visits to www.TexasTenStep.org.
 - **Timeframe & Action Plan:**
 - Work is ongoing to build on past success.

- **Smoking Cessation** — through partnership and collaboration, the DSHS Title V MCH program participates in initiatives to increase referrals to the Texas Quitline, which offers confidential phone and web counseling services and resources, to decrease smoking among women of childbearing age and reduce maternal smoking. Smoking increases the risk for severe maternal complications during labor and delivery. Also, smoking during pregnancy can cause a baby to be born too early or to have low birth weight—making it more likely the baby will be sick and have to stay in the hospital longer. Smoking during and after pregnancy is also a risk factor of Sudden Infant Death Syndrome.
 - **Outcomes:** >96 percent abstain from smoking while pregnant.
 - **Timeframe & Action Plan:**
 - Work is ongoing to build on past success.

- **Healthy Texas Families** — led by the Health and Human Services Commission (HHSC), this project is aimed at identifying and designing services that will enhance early entry and engagement into prenatal care services through a contract with UT. DSHS epidemiologic surveillance and data analysis identified Smith and Hidalgo counties as most in need of these services, with a focus on African American/Black and Hispanic women of childbearing age.
 - **Outcomes:** Expected reduction in associated risk factors for both maternal and infant mortality in Smith and Hidalgo counties among project participants.
 - **Timeframe & Action Plan:**
 - DSHS ongoing program evaluation technical support.

Evaluation

- As part of its public health strategy, DSHS Title V MCH includes an evaluation component to measure the effectiveness of each program in improving maternal health and outcomes.

- In addition, a **regional analysis of maternal and infant health** is underway. Beginning with Northeast and South Texas to inform Title V MCH programming and the Healthy Texas Families project, DSHS is conducting a regional analysis of maternal and infant health, including (but not limited to) access to health care and maternal risk factors such as smoking, obesity, diabetes, hypertension, substance use, and physical abuse. DSHS will also perform geographic mapping at the county level for obtainable indicators to gain a better understanding of a particular region and the state as a whole.
 - **Statutory Authority:** Health and Safety Code, Chapter 161.
 - **Outcomes:** Report in progress.
 - **Timeframe & Action Plan:**
 - Overview of the state completed in April 2017, including geographic, population, and socioeconomic characteristics, as well as mobility/migration patterns and health care coverage and access.
 - Final report due April 2018, with Northeast and South Texas results expected prior to this date.

- DSHS Title V MCH continues to perform ongoing assessment of the needs and current state of maternal health in Texas using statewide surveillance data.

Collaboration

- The work of Title MCH is advanced through collaboration with many national and state agencies and organizations — all aimed at improving maternal health.
- Key partners include, but are not limited to the Association of Maternal and Child Health Programs, Association of State and Territorial Health Officials, Texas Medical Association, Texas Hospital Association, Texas Dental Association, Texas Association of Local Health Officials, March of Dimes, and other key stakeholder groups for Maternal and Child Health populations.
- DSHS is facilitating a **Maternal Mortality Forum** to inform key partners in maternal health and health care on the issue of maternal mortality. The forum will take place in fall 2017, with three main technical planning workgroups: 1) data collection and reporting; 2) systems of care; and 3) public health systems. The goal is to harness the expertise of multidisciplinary professionals, who share an interest in helping to reduce the burden of maternal mortality in Texas, to create action plans for implementing evidence-based initiatives throughout the state.