

Hyperemesis Gravidarum Strategic Plan, Fiscal Years 2023- 2027: Fiscal Year 2024 Update

**As Required by
Senate Bill 1941, 87th Legislature, Regular Session, 2021**

**Texas Health and Human Services
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Table of Contents

Executive Summary	3
Introduction.....	4
Background.....	5
Hyperemesis Gravidarum Overview'.....	5
State Efforts Related to Hyperemesis Gravidarum	6
Strategic Plan	12
Priority 1	12
Priority 2	16
Conclusion	20
List of Acronyms	21

Executive Summary

Traditional morning sickness is a common and expected symptom of pregnancy. Hyperemesis gravidarum (HG), however, is a disorder that causes extreme, persistent nausea and vomiting during pregnancy. It can lead to dehydration, weight loss, electrolyte imbalance, and a variety of other serious physical and mental health issues that can increase the risk of negative outcomes for mother and baby. Apart from the primary symptoms, HG can also have a significant impact beyond pregnancy, including job loss or difficulties at work, fear of future pregnancy, and behavioral health issues.

HG has been an often-undertreated disorder. However, the biological, psychological, and social impact of the condition on women and children can be devastating. To address these needs, the Texas Health and Human Services Commission (HHSC), in coordination with the Texas Department of State Health Services (DSHS) initiated a five-year strategic plan in September 2022. This plan is updated annually reflecting changes to our scientific understanding of the problem and any changes made to activities, goals, and objectives. Under the five goals established by Senate Bill 1941, 87th Legislature, Regular Session, 2021, the plan lists eight objectives that seek to achieve two broad priorities:

- Help clinicians and hospitals better recognize and treat HG using evidence-based protocols.
- Improve health and social support for pregnant women and infants impacted by HG.

These priorities complement other efforts by state entities to improve birth outcomes for mothers and babies and reduce maternal morbidity and mortality, including DSHS' [Texas Maternal Mortality and Morbidity Review Committee](#), the [TexasAIM](#) program, and the [Texas Collaborative for Healthy Mothers and Babies](#) initiatives.

Introduction

[Senate Bill 1941](#), 87th Legislature, Regular Session, 2021, requires HHSC to develop and implement a five-year strategic plan to improve the diagnosis and treatment of and raise public awareness of HG.

In compliance with Texas Health and Safety Code, [Section 32.047](#), the goals of HHSC's HG strategic plan are to:

1. Increase awareness among state-administered program providers who may serve women at risk of or experiencing HG about the prevalence and effects of HG on outcomes for women and their children;
2. Establish a referral network of community-based health care providers and support services addressing HG;
3. Increase women's access to formal and informal peer delivered support services, including access to certified peer specialists who have successfully completed additional training related to HG;
4. Raise public awareness of HG; and
5. Leverage sources of funding to support existing community-based HG screening, referral, treatment, and support services.

This strategic plan was developed in partnership with DSHS and the Texas Statewide Health Coordinating Council.

Background

Hyperemesis Gravidarum Overview^{1,2}

HG is a disorder that causes a person to experience extreme, persistent nausea and vomiting during pregnancy that may lead to dehydration, weight loss, electrolyte imbalance, and a variety of other life-threatening health and mental health issues.

While pregnant women commonly experience morning sickness – a form of mild nausea and vomiting that occurs primarily during the first three months of pregnancy – HG is less common and more severe. Pregnant women with morning sickness can typically have trouble eating and drinking some of the time, but symptoms of HG are more debilitating and can have serious consequences for both mother and baby. It is estimated that between one and three percent of pregnant women are hospitalized for HG. However, because it can be difficult to differentiate between typical morning sickness and HG, the impact of the disease may be underrepresented.³

HG symptoms are not limited to nausea and vomiting – patients may also experience an aversion to food, weight loss, decrease in urination, dehydration, headaches, confusion, fainting, jaundice (yellowing of the skin, the whites of the eyes, or both), fatigue, low blood pressure, rapid heart rate, loss of skin elasticity, and anxiety or depression related to their condition. These symptoms can increase the risk of negative outcomes for parent and baby.

Potential fetal-infant complications associated with HG include risk of miscarriage or stillbirth, premature birth, skin abnormalities, low birth weight, skeletal malformations, behavioral and emotional disorders, and sensory processing

¹ "Hyperemesis gravidarum." *A.D.A.M. Medical Encyclopedia, Medline Plus*, National Institutes of Health. January 1, 2021. Accessed July 3, 2024. <https://medlineplus.gov/ency/article/001499.htm>.

² "About Hyperemesis gravidarum (HG)." HER Foundation. Accessed July 3, 2024. <https://www.hyperemesis.org/about-hyperemesis-gravidarum/>.

³ Emerging research suggests that abnormalities in the Growth Differentiation Factor 15 (GDF15) gene are the greatest genetic risk factor for HG. This finding can potentially assist in the identification and treatment of HG. Fejzo, M. S., MacGibbon, K. W., First, O., Quan, C., & Mullin, P. M. (2022). Whole-exome sequencing uncovers new variants GDF15 associated with hyperemesis gravidarum. *BJOG: An International Journal of Obstetrics & Gynaecology*, 129(11), 1845–1852. <https://doi.org/10.1111/1471-0528.17129>. Accessed on July 3, 2024.

disorder. While the long-term impact of HG on children is not yet clear, some research finds higher risks of psychiatric, metabolic, and coronary disease in children who are born to women who suffered from HG.

Apart from the primary symptoms, HG can also have a significant impact beyond pregnancy, including job loss or difficulties at work, fear of future pregnancy, and mental health struggles like depression or anxiety.

State Efforts Related to Hyperemesis Gravidarum

State-Administered Services

HG can start early in pregnancy. Early and effective prenatal care is critical for women diagnosed with, or at risk of HG. HHSC administers several programs that treat pregnant women and reduce the likelihood of poor outcomes.

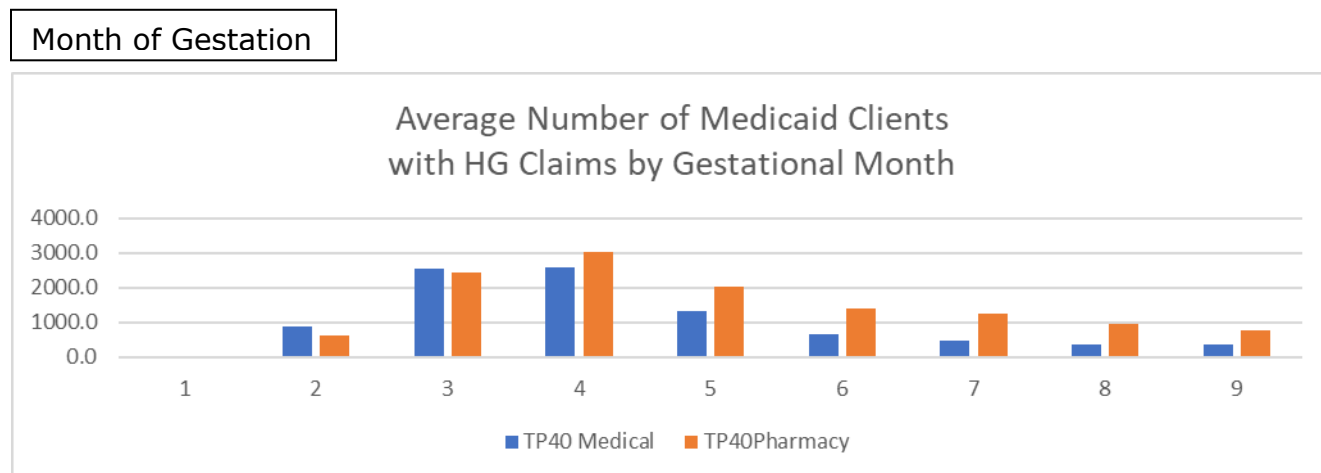
Medicaid and CHIP Services

Medicaid and the Children's Health Insurance Program (CHIP) cover a broad range of services for low-income women who are pregnant or postpartum, including doctor visits, laboratory testing, counseling and education, and prescription drug coverage including prenatal vitamins. Obstetricians enrolled in Medicaid and CHIP play a major role in identifying and treating women with HG. These programs are primarily administered through health plans, which may identify women with HG to have a high-risk pregnancy. In these cases, they would qualify for service coordination that includes the development of a service plan. Many of these patients have complex needs that range from specialty referrals and medical equipment or supplies to educational, psychosocial, financial, and transportation services. Case managers or services coordinators can help patients and their families access these services.

HG Treatment in Medicaid and CHIP

Between 2016 and 2023, HHSC processed more than 316,000 medical and pharmacy claims related to HG in Medicaid and CHIP. While women were treated throughout their pregnancy, most Medicaid claims related to HG were submitted for women in the third and fourth months of pregnancy, as shown in Figure 1.

Figure 1. Average Medicaid Clients with HG Claim by Gestational Month, 2016 to 2023⁴



Since fiscal year 2018, the number of pregnant women treated for HG in Medicaid each year has decreased by 39.8 percent. Similarly, the number of providers with HG claims has decreased each year, with the exception of a 0.45 percent increase in fiscal year 2020 and a 5.2 percent increase in fiscal year 2023. Table 1 lists the total number of Medicaid claims filed between fiscal years 2018 and 2023, and the number of women treated in Medicaid.

Table 1. Medicaid Claims for HG, by Provider and Women Served⁵

Measure	FY18	FY19	FY20	FY21	FY22	FY23
Providers with HG Claims	1,525	1,329	1,335	1,309	1,363	1,434
Women Treated for HG	8,449	7,996	6,534	6,317	6,007	5,083

Special Supplemental Nutrition Program for Women, Infants and Children

The presence of HG puts pregnant women at nutrition risk. The Special Supplemental Nutrition Program for Women, Infants and Children (WIC) works to

⁴ Type Program 40 (TP40) is a Medicaid program eligibility type in Texas that applies to pregnant women who are under 198 percent of the federal poverty level.

⁵ Data are restricted to Medicaid for Pregnant Women clients who had an HG diagnosis and a paid Medicaid delivery. Fiscal year 2023 claims are current as of May 2024.

improve the health of pregnant women at nutrition risk, including those with HG, by providing nutritious foods to supplement diets, nutrition and breastfeeding education, and healthcare referrals. WIC nutritionists screen for HG as a risk factor and provide education and referral to a healthcare professional when symptoms are identified. See Table 2 for detailed information on women with a risk code for HG served by WIC.

Table 2. Pregnant WIC Recipients with Identified HG Risk Factor⁶

Fiscal Year	Individual Pregnant Women Serviced by WIC⁷	Pregnant Women with Hyperemesis Gravidarum	Percentage
2018	188,429	1,007	0.53%
2019	194,274	1,275	0.66%
2020	190,203	988	0.52%
2021	184,127	734	0.40%
2022	198,400	881	0.44%
2023	210,947	903	0.43%

Other Maternal Health Initiatives

Maternal Depression Strategic Plan

In fiscal year 2020, HHSC launched a strategic plan to improve access to postpartum depression screening, referral, treatment, and support services. Because HG is a risk factor for perinatal mood and anxiety disorders, HHSC is working to ensure the HG strategic plan and the maternal depression strategic plan work in tandem to support parents who struggle with maternal depression during or after a pregnancy marked by HG.

⁶ HHSC WIC, 2023

⁷ Counts are of individual women receiving benefits during each fiscal year, not pregnancies.

High-Risk Maternal Care Coordination Services Pilot

In July 2023, DSHS launched the High-Risk Maternal Care Coordination Services Pilot program in collaboration with university and public health partners. The program identifies pregnant and postpartum women at risk of poor pregnancy, birth, or postpartum outcomes. It also provides education, care coordination, and referrals to address risk factors and improve maternal health outcomes. In fiscal year 2024, DSHS is implementing the second and final year of the pilot.

The program's community health workers screen participants for poor pregnancy, birth, or postpartum outcomes. Community health workers provide participants with counseling and support to recognize risks, seek care, and self-advocate for their health. DSHS provides ongoing technical assistance and training to the program's community health workers on:

- Preconception, pregnancy, and postpartum health;
- Risk behaviors;
- Care coordination; and
- Recruitment and referrals.

Hear Her Texas

The DSHS [Hear Her Texas Maternal Health Campaign](#) aims to empower pregnant and postpartum women to know their health history and the urgent maternal warning signs and to speak up when they have concerns. The campaign is also dedicated to encouraging everyone, including providers, caregivers, friends, and family, to listen to her concerns and take action to prevent severe maternal morbidity and mortality.

In fiscal year 2023, DSHS continued to use media and outreach to increase public awareness about Texas maternal morbidity rates, pregnancy-related complications, and urgent maternal warning signs. *Hear Her Texas Campaign* strategies promote prevention, resources, and best practice messaging among women of childbearing age, pregnant and postpartum women, healthcare providers, and other populations. In November 2022, DSHS launched the [Hear Her Texas website](#), which includes information and educational resources for women who are pregnant or have been pregnant in the past year, their support networks, and health care providers. Resources include an Urgent Maternal Warning Signs poster, Hear Her Texas palm cards and conversation guides, and five testimonial videos from Texas women who experienced and sought help for health complications during or after pregnancy.

One of the videos describes a woman's experience with HG and cholestasis of pregnancy.

In fiscal years 2024-2025, DSHS campaign efforts include:

- Expansion of campaign messaging reach;
- Stakeholder research to gain insight on effective strategies for incorporating messaging and maternal morbidity prevention strategies in existing state and local maternal health initiatives;
- Enhancing the campaign website and refreshing social media to increase campaign engagement; and
- Implementing comprehensive stakeholder outreach and engagement.

Strategic Plan

To meet the [goals established by Senate Bill 1941](#), HHSC identified two broad priorities: 1) Help clinicians and hospitals better recognize and treat HG using evidence-based protocols; and 2) Improve health and social support for pregnant women and infants impacted by HG.

These priorities focus on making sure HG is identified and treated as early and appropriately as possible, and that pregnant women who are at risk of or suffering from HG have the medical and social support they need to safely carry and deliver a healthy baby. These priorities guide eight specific objectives, as outlined below, each of which supports one or more statutory goals.

Priority 1

Help clinicians and hospitals better recognize and treat HG using evidence-based protocols.

HG's symptoms almost always begin before nine weeks of pregnancy, frequently before a woman begins prenatal care.⁸ Getting regular prenatal care beginning in the first trimester of pregnancy can help patients suffering from HG to get individualized obstetric care⁹ and access to timely treatment.

Further, while early detection is critical to avoid adverse outcomes, women must have access to appropriate treatment. Implementing best practices and protocols among clinicians and facilities can improve outcomes. The strategies and activities outlined below seek to improve provider education, access to screening, and the quality of treatment.

⁸ According to the American College of Obstetricians and Gynecologists (ACOG); Committee on Practice Bulletins-Obstetrics (2018). ACOG Practice Bulletin No. 189: Nausea and Vomiting of Pregnancy. *Obstetrics and gynecology*, 131(1), e15–e30.

<https://doi.org/10.1097/AOG.0000000000002456>): "the timing of onset of nausea and vomiting is important—symptoms of nausea and vomiting of pregnancy manifest before 9 weeks of gestation in virtually all affected women. When a patient experiences nausea and vomiting for the first time after 9 weeks of gestation, other conditions should be carefully considered in the differential diagnosis." However, [recent Texas data](#) shows nearly 1/3 of women had late entry into prenatal care, with prenatal care beginning after the 13th week of pregnancy.

⁹ American Academy of Pediatrics, American College of Obstetricians and Gynecologists (2017). *Guidelines for Perinatal Care, Eighth Edition*. <https://www.acog.org/clinical-information/physician-faqs/-/media/3a22e153b67446a6b31fb051e469187c.ashx>

Objective 1.1. Educate clinicians to recognize, treat HG.

Supports Goals:¹⁰ (1) Increase awareness among state-administered program providers who may serve women at risk of or experiencing HG about the prevalence and effects of HG on outcomes for women and their children. (5) Leverage sources of funding to support existing community-based HG screening, referral, treatment, and support services.

Activities

- **Fiscal Year 2023:** Sought educational materials for promotion among clinical (doctors, nurses, hospitals, clinics, nutritionists) and non-clinical audiences. In May 2023, HHSC's Office of Disability Prevention for Children hosted a webinar, "Demystifying Hyperemesis Gravidarum: What's New? What Works?." A total of 537 healthcare professionals and other stakeholders attended.
- **Fiscal Year 2024:** Distributed educational materials through existing channels, such as health plans; WIC; Title V Fee-for-Service providers; the Texas Medicaid & Healthcare Partnership; Texas Health Steps; Texas Ten Step hospitals; and the Office of Disability Prevention for Children.
 - ▶ On February 6, 2024, Texas WIC offered a virtual training for local subcontractors, "Navigating Nutrition Challenges in Hyperemesis Gravidarum," presented by Kimber MacGibbon from the HER Foundation. A total of 97 WIC providers attended. This training will also be added to the Learning Management System for WIC local agency staff.
 - ▶ On August 22, 2024, "Navigating Nutrition Challenges in Hyperemesis Gravidarum" was presented by Kimber MacGibbon of the HER Foundation as a breakout session at the Texas WIC Nutrition and Breastfeeding Conference.
- **Planned Activities for Fiscal Year 2025:** Identify opportunities to increase awareness in emergency centers and other clinical settings about the importance of assessing for pregnancy and postpartum status and seeking

¹⁰ Supporting goals correspond to provisions of Senate Bill 1941, 87th Legislature, Regular Session, 2021.

obstetric consults in diagnosis and management of pregnancy-related conditions and complications.

Objective 1.2. Leverage existing referral networks.

Supports Goals: (2) Establish a referral network of community-based healthcare providers and support services addressing HG. (5) Leverage sources of funding to support existing community-based HG screening, referral, treatment, and support services.

Activities

- **Fiscal Year 2024:** Conducted outreach to pregnant women and healthcare providers to increase the number of pregnant women enrolled in WIC.
 - ▶ Texas WIC conducted outreach for pregnant women to increase early enrollment in WIC. The campaign included:
 - ◇ **Year Round** – Digital ads reaching women in their first trimester using pregnancy test imagery and messaging such as “As soon as you learn you are pregnant, apply for WIC.”
 - ◇ **June 3 – July 29** – Point-of-care outreach at 500 obstetrics and gynecology, pediatric, and family practice offices across the state. Outreach included posters, flyers, and an outreach video playing in physician offices that directs clients through a QR code to begin their WIC application.
- **June – Mid August** – Outdoor advertising outreach with the call to action “Pregnant Moms, Apply Now.” The campaign included 270 neighborhood posters throughout the state and 23 large billboards near major medical centers.
- **June 6 – August 31** - Texas WIC ran a campaign promoting WIC’s prenatal and breastfeeding services and resources website. This site provides health care providers the option to directly refer their clients to the WIC program. Through the Refer-A-Mom page, the physician completes a short referral form and the local WIC office contacts the mother directly within 72 hours. This digital campaign used banner ads and Google Responsive Display ads to target individuals who were identified as health care professionals or interested in maternal health care topics.

- **Planned Activities for Fiscal Year 2025:**
 - ▶ Compare existing, community-based referral networks to Medicaid-enrolled providers to identify providers with experience treating HG.
 - ▶ Expand eligible Case Management for Children and Pregnant Women Medicaid providers to include community health workers and doulas, as authorized by HB 1575, 88th Legislature, Regular Session, 2023.

Objective 1.3. Improve awareness of available services.

Supports Goals: (2) Establish a referral network of community-based healthcare providers and support services addressing HG.

Activities

- **Fiscal Year 2024:** Developed a maternal health service handbook to educate the public on HHSC services for pregnant and postpartum women.
 - ▶ HHSC is expanding the one-stop Family Resources website to educate the public on HHSC services for pregnant and postpartum women, in accordance with the 2024-25 General Appropriations Act, House Bill 1, 88th Legislature, Regular Session, 2023 (Article 2, HHSC, Rider 68).
- **Planned Activity for Fiscal Year 2025:** Launch the expanded Texas Family Resources website.
- **Planned Activity for Fiscal Year 2026:** Require health plan service coordinators who work with pregnant women to have basic training in HG and awareness of resources to screen, treat, and support women with HG. HHSC included these requirements in the State of Texas Access Reform and CHIP procurement, which was posted on December 2022 and is currently planned to be operational in fiscal year 2026. Procurement updates are available at www.hhs.texas.gov/business/contracting-hhs/procurement-opportunities.

Objective 1.4 Improve women’s early entry into prenatal care in HHSC programs.

Supports Goals: (2) Establish a referral network of community-based healthcare providers and support services addressing HG.

Activities

- **Fiscal Year 2024:** Determined the average gestational age upon entry to prenatal care for women in Medicaid for Pregnant Women, CHIP, and other HHSC programs serving pregnant women is three months.
- **Planned Activity for Fiscal Year 2025:** Identify barriers that delay entry into prenatal care for women or prevent women with HG from receiving recommended prenatal care.
- **Planned Activity for Fiscal Year 2026:** Work with health plans, women’s health providers, and other stakeholders to determine solutions to barriers for women with HG.

Priority 2

Improve health and social support for pregnant women and infants impacted by HG.

Severe nausea and vomiting can diminish a woman’s quality of life and affect her psychosocial health.¹¹ The strategies below seek to inform peers, partners, paraprofessionals, and others who may interact with women at risk of or diagnosed with HG to prevent and address social isolation and help women meet their emotional needs. It also includes activities to evaluate the effectiveness of HG interventions in improving the health of women with HG receiving HHSC services.

¹¹ American College of Obstetricians and Gynecologists, [Practice Bulletin 189, Nausea and Vomiting of Pregnancy](#), January 2018.

Objective 2.1. Identify existing HG peer delivered support.

Supports Goals: (3) Increase women’s access to formal and informal peer delivered support services, including access to certified peer specialists who have successfully completed additional training related to HG. (5) Leverage sources of funding to support existing community-based HG screening, referral, treatment, and support services.

Activities

Planned Activities for Fiscal Year 2025:

- Survey existing peer-delivered support providers, like community health workers, and others, regarding their knowledge of HG’s prevalence, symptoms, risks to mother and baby’s health, and treatment options.
- Work with subject matter experts to identify and promote existing opportunities for peer support specific to HG.
- Assess current peer-delivered services available to pregnant women across the state, including existing peer support for women with HG.
- Develop a training for certified peer specialists to expand their knowledge of HG.

Objective 2.2. Educate women, peers, and public.

Supports Goals: (3) Increase women’s access to formal and informal peer delivered support services, including access to certified peer specialists who have successfully completed additional training related to HG. (5) Leverage sources of funding to support existing community-based HG screening, referral, treatment, and support services.

Activities

- **Fiscal Year 2024:** Distributed educational materials through the Office of Disability Prevention for Children.
- **Planned Activities for Fiscal Years 2025 - 2027:**
 - ▶ Identify ways to incorporate HG as part of ongoing maternal health education efforts.
 - ▶ Develop new or revise existing trainings, websites, and informational materials to include information on HG.

Objective 2.3. Raise awareness among social service providers.

Supports Goals: (4) Raise public awareness of HG. (5) Leverage sources of funding to support existing community-based HG screening, referral, treatment, and support services.

Activities

- **Fiscal Year 2023:** Identified social service providers that frequently serve pregnant women. HHSC programs with a maternal health service component met monthly to improve coordination and service outcomes for women before, during, and after pregnancy.
- **Fiscal Year 2024:**
 - ▶ On February 6, 2024, Texas WIC offered a virtual training for local subcontractors, "Navigating Nutrition Challenges in Hyperemesis Gravidarum," presented by Kimber MacGibbon from the HER Foundation. A total of 97 WIC providers attended. This training will also be added to the Learning Management System for WIC local agency staff.
 - ▶ On August 22, 2024, "Navigating Nutrition Challenges in Hyperemesis Gravidarum" was presented by Kimber MacGibbon of the HER Foundation as a breakout session at the Texas WIC Nutrition and Breastfeeding Conference.

- **Planned Activity for Fiscal Year 2025:** Evaluate the most likely referral sources for women experiencing severe nausea and distribute educational materials to identified providers.

Objective 2.4. Evaluate HHSC interventions.

Supports Goals: (4) Raise public awareness of HG. (5) Leverage sources of funding to support existing community-based HG screening, referral, treatment, and support services.

- **Fiscal Year 2023:** HHSC developed an evaluation design, including evaluation measures, to assess the effectiveness of HG interventions.
- **Fiscal Year 2024:** Data collection and analysis are in progress
- **Planned Activity for Fiscal Year 2025:** Report HG data.
- **Planned Activity for Fiscal Year 2027:** Draft Strategic Plan for Fiscal Years 2028-2032 based on evaluation findings.

Conclusion

HG is a serious condition. Through the efforts detailed above, HHSC and its partners hope to ensure women with HG can access and receive the medical, psychological, and social support they need for healthy pregnancies.

HHSC reviews this strategic plan on an annual basis. These reviews include progress on listed strategies, and, in future years, an evaluation of state interventions on health outcomes, as described in Objective 2.4.

This plan is one of many Texas initiatives to improve maternal health outcomes. In addition to prenatal services, HHSC offers an array of preconception and postpartum services aimed at promoting healthy mothers and babies. Many of these programs are detailed at www.hhs.texas.gov/services/health/women-children.

List of Acronyms

Acronym	Full Name
CHIP	Children's Health Insurance Program
DSHS	Department of State Health Services
FY	Fiscal Year
HG	Hyperemesis Gravidarum
HHSC	Health and Human Services Commission
WIC	Special Supplemental Nutrition Program for Women, Infants and Children