

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

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

**Texas Health and Human Services
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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 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 Health and Human Services Commission (HHSC), in coordination with the Department of State Health Services (DSHS), is implementing a five-year strategic plan. This plan will be 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 the Health and Human Services initiatives [Texas Maternal Mortality and Morbidity Review Committee](#), the [TexasAIM](#) program, and the [Texas Collaborative for Healthy Mothers and Babies](#).

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 and subsequent outcomes for women and their children;
2. Establish a referral network of community-based healthcare providers and support services addressing HG;
3. Increase women's access to formal and informal peer 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 is 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 eat and drink 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 and/or the whites of the eyes), 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/emotional disorders, and sensory processing disorder.

¹ "Hyperemesis gravidarum." *A.D.A.M. Medical Encyclopedia, Medline Plus*, National Institutes of Health. January 1, 2021. Accessed July 21, 2023. <https://medlineplus.gov/ency/article/001499.htm>.

² "About Hyperemesis gravidarum (HG)." HER Foundation. Accessed July 21, 2023. <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 Aug. 1, 2023.

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.

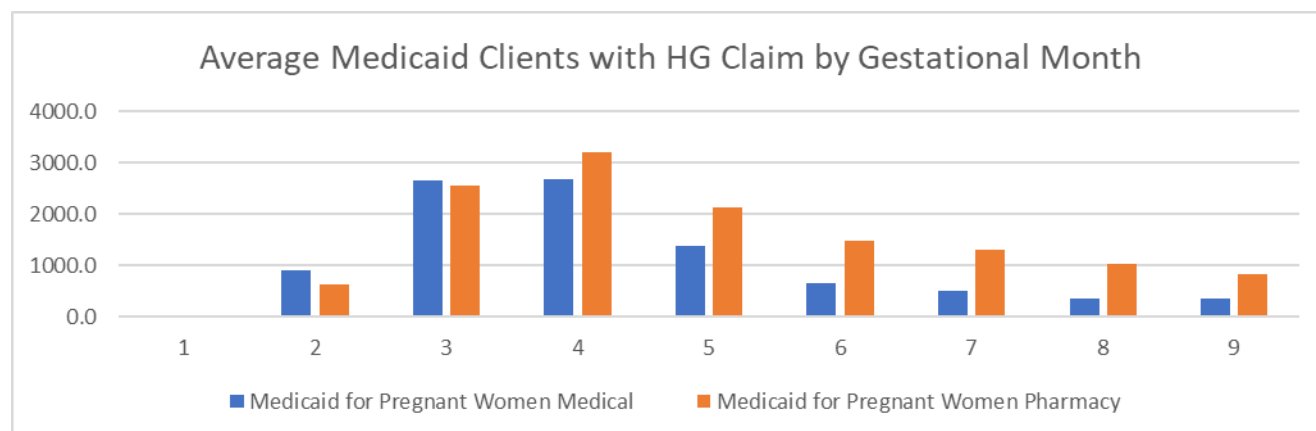
Medicaid and CHIP Services

Medicaid and Children's Health Insurance Program (CHIP) cover a broad range of services for low-income women who are pregnant, including prenatal 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 get these services.

HG Treatment in Medicaid and CHIP

Between 2016 and 2022, HHSC processed more than 280,000 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 2022



Since 2018, the number of women treated in Medicaid for HG has decreased. Table 1 lists the total number of Medicaid claims filed between 2018 and 2022, and the number of women treated in Medicaid.

Table 1. Medicaid Claims for HG, by Provider and Women Served⁴

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

WIC

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

⁴ Data are restricted to Medicaid for Pregnant Women clients who had a hyperemesis diagnosis and a paid Medicaid delivery. Fiscal year 2022 claims are current as of June 2023.

Table 2. Pregnant WIC Recipients with Identified HG Risk Factor⁵

Fiscal Year	Individual Pregnant Women Serviced by WIC⁶	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%

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.

⁵ HHSC WIC, 2022

⁶ Counts are of individual women receiving benefits during each fiscal year, not pregnancies.

High-Risk Maternal Care Coordination Services Pilot

DSHS is supporting a pilot site with resources, technical assistance, training, and guidance to develop and implement a High-Risk Maternal Care Coordination Services Program in Smith County, Texas. The pilot site is designed to provide high-risk maternal health screening, education, health promotion, and care coordination services to pregnant women with identified risk factors that may contribute to poor maternal health outcomes. This program integrates community health workers who provide ongoing supportive education and care coordination services to help clients recognize risks, connect with needed services and care, increase healthy behaviors, and self-advocate for their health. Pilot project implementation began in June 2023 and will continue through fiscal year 2024.

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. Another video describes a woman's experience with perinatal depression and post-traumatic stress disorder.

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.⁷ Getting regular prenatal care beginning in the first trimester of pregnancy can help patients suffering from HG to get individualized obstetric care⁸ 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.

⁷ 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.

⁸ 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:⁹ (1) Increase awareness among state-administered program providers who may serve women at risk of or experiencing HG. (5) Leverage sources of funding to support existing community-based HG screening, referral, treatment, and support services.

Activities

- **Fiscal Year 2023:** Seek out educational materials for promotion among clinical (doctors, nurses, hospitals, clinics, nutritionists) and non-clinical audiences. In May 2023, the 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:** Distribute educational materials through existing channels, such as health plans; WIC; Title V Fee-for-Service providers; Texas Medicaid & Healthcare Partnership; Texas Health Steps; Texas Ten Step hospitals; and the Office of Disability Prevention for Children.
- **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 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.

⁹ Goals correspond to provisions of S.B. 1941, 87th Legislature, Regular Session, 2021.

Activities

- **Fiscal Year 2024:** Conduct outreach to pregnant women and healthcare providers to increase the number of pregnant women enrolled in WIC.
- **Fiscal Year 2025:** Compare existing, community-based referral networks to Medicaid-enrolled providers to identify providers with experience treating HG.

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 2023:** Require health plan services 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.
- **Fiscal Year 2024:** Develop a maternal health service handbook to educate the public on HHSC services for pregnant and postpartum women.
- **Fiscal Year 2025:** Publish the handbook and distribute to relevant stakeholders.

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:** Determine the average gestational age upon entry to prenatal care for women in Medicaid for Pregnant Women, CHIP, and other programs serving pregnant women.
- **Fiscal Year 2025:** Identify barriers that delay entry into prenatal care for women or prevent women with HG from receiving recommended prenatal care.
- **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.¹⁰ 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.

Objective 2.1. Identify existing HG peer support.

Supports Goals: (3) Increase women's access to formal and informal peer 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.

¹⁰ American College of Obstetricians and Gynecologists, [Practice Bulletin 189, Nausea and Vomiting of Pregnancy](#), January 2018.

Activities

- **Fiscal Year 2024:**

- ▶ Survey existing peers, like community health workers, WIC peer counselors, 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 services available to pregnant women across the state, including existing peer support for women with HG.

Objective 2.2. Educate women, peers, and public.

Supports Goals: (3) Increase women's access to formal and informal peer 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 Years 2023-2027:**

- ▶ 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:** Identify social service providers that frequently serve pregnant women. HHSC programs with a maternal health service component meet monthly to improve coordination and service outcomes for women before, during, and after pregnancy.
- **Fiscal Year 2024:** Evaluate the most likely referral sources for women experiencing severe nausea.
- **Fiscal Year 2025:** 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:** Develop evaluation design, including potential evaluation measures, to assess the effectiveness of HG interventions. HHSC is currently developing an evaluation design proposal.
- **Fiscal Year 2024:** Begin collecting data for evaluation.
- **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
HG	Hyperemesis Gravidarum
HHSC	Health and Human Services Commission
WIC	Special Supplemental Nutrition Program for Women, Infants and Children