

Hyperemesis Gravidarum Strategic Plan, Fiscal Years 2023- 2027

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

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Executive Summary

Traditional morning sickness is a common and expected symptom of pregnancy. Hyperemesis gravidarum (HG), however, is a rare 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.

The cause of HG is still unknown; 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. 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; and
- 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 (HHS) initiatives [Texas Maternal Morbidity and Mortality 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 providers' awareness about the prevalence and effects of HG on outcomes for parents and children;
2. Establish a referral network of community-based healthcare providers and Support services addressing HG;
3. Increase access to 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 funding sources to support 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 rare 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 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.

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, congenital heart disease, skin abnormalities, low birth weight, hip dysplasia, skeletal malformations, behavioral/emotional disorders, and sensory processing 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.

¹ "Hyperemesis gravidarum." *A.D.A.M. Medical Encyclopedia, Medline Plus*, National Institutes of Health. January 1, 2021. Accessed March 11, 2022. <https://medlineplus.gov/ency/article/001499.htm>.

² "About Hyperemesis gravidarum (HG)." HER Foundation. Accessed March 11, 2022. <https://www.hyperemesis.org/about-hyperemesis-gravidarum/>.

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.

The cause of HG is still unknown, but risk factors can include being pregnant with multiple babies, previous personal or family history, and being pregnant with a female fetus.³

Milder forms of HG can be treated with dietary changes, rest, and antacids, while more serious cases may require hospitalization and intravenous fluids and nutrition, tube feeding, and other medications. In fact, "HG is the leading cause of hospitalization during early pregnancy, and second to premature labor as the leading cause overall during pregnancy."⁴ However, early identification and treatment can prevent serious complications.⁵

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) Perinatal (sometimes referred to as CHIP-P) covers 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

³ "Morning Sickness: Nausea and Vomiting of Pregnancy." American College of Obstetricians and Gynecologists. Accessed June 3, 2022. <https://www.acog.org/womens-health/faqs/morning-sickness-nausea-and-vomiting-of-pregnancy>

⁴ "Overview of HG." *About HG For Family*. HER Foundation. Accessed March 11, 2022. <https://www.hyperemesis.org/who-we-help/family-friends/about-hg-for-family-friends/>

⁵ The American College of Obstetricians and Gynecologists (ACOG) Practice Bulletin No. 189: Nausea And Vomiting Of Pregnancy (January 2018). Accessed July 5, 2022. https://journals.lww.com/greenjournal/Abstract/2018/01000/ACOG_Practice_Bulletin_No_189_Nausea_And.39.aspx

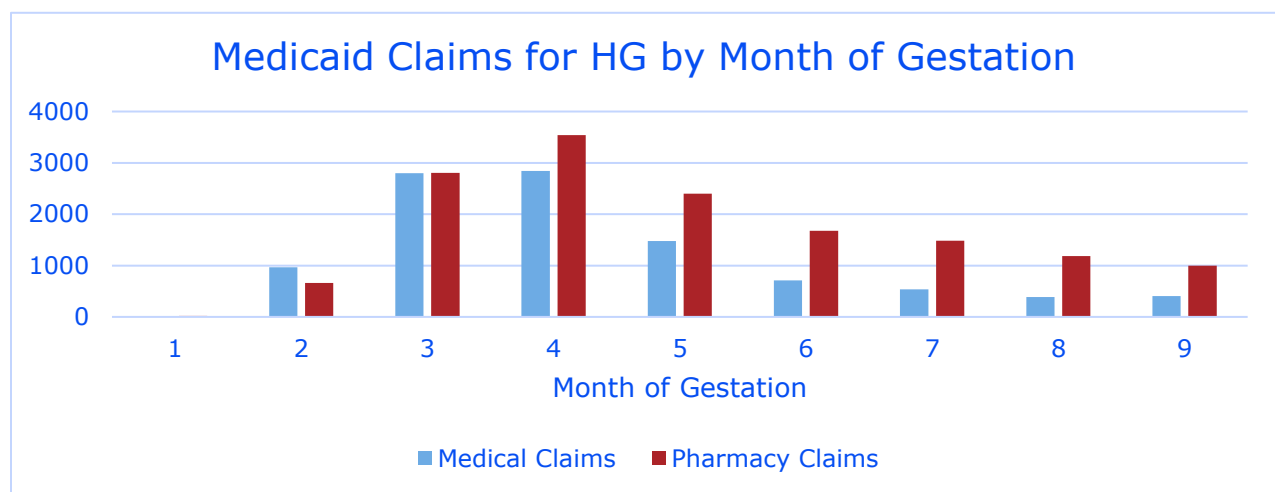
provide service coordination for pregnant women who may need additional support to address HG impacts.

Additionally, women with HG may be considered to have a high-risk pregnancy. In these cases, they would qualify for special service coordination. Many of these patients have complex needs that range from specialty referrals and medical equipment/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 2021, HHSC processed more than 240,000 medical and pharmacy claims related to HG in Medicaid and CHIP. While women were treated throughout their pregnancy, most Medicaid claims were submitted for women in the third and fourth months of pregnancy, as shown in Figure 1.

Figure 1. Medicaid Claims for HG, by Month of Gestation



Since 2016, Medicaid claims for HG have decreased. Table 1 lists the total number of Medicaid claims filed between 2016 and 2021, and the number of women treated in Medicaid.

Table 1. Medicaid Claims for HG, by Provider and Women Served⁶

Measure	2018	2019	2020	2021
Providers with HG Claims	1,525	1,329	1,335	1,293
Women Treated for HG	8,449	7,996	6,534	6,284

This downward trend is true among medical and pharmacy claims in both Medicaid and CHIP.

WIC

The presence of HG puts pregnant women at nutrition risk. The 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.

Table 2. Pregnant WIC Recipients with Identified HG Risk Factor⁷

Fiscal Year	Individual Pregnant Women Serviced by WIC ⁸	Pregnant Women with Hyperemesis Gravidarum	Percentage
2018	188,429	1,007	0.53%
2019	194,274	1,275	0.66%

⁶ HHSC Data, Analytics, and Performance (2022). Data include Texas Medicaid paid and denied medical and pharmacy claims for female clients age 13 years and above with HG during pregnancy. HG in medical claims is defined using ICD-10 diagnosis codes O21.0 and O21.1 in the primary diagnosis field. Pharmacy claims were extracted for clients with primary diagnosis HG in medical claims using National Drug Codes (NDC) for HG. FY 2021 claims are current as of August 2022.

⁷ HHSC WIC, 2022

⁸ Counts are of individual women receiving benefits during each fiscal year, not pregnancies.

Fiscal Year	Individual Pregnant Women Serviced by WIC⁸	Pregnant Women with Hyperemesis Gravidarum	Percentage
2020	190,203	988	0.52%
2021	184,127	734	0.40%

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.

High-Risk Maternal Care Coordination Services Pilot

Beginning the summer of fiscal year 2022, DSHS began supporting a pilot site with resources, technical assistance, training, and guidance to implement services including maternal high-risk screening, education, health promotion, and care coordination to address barriers to care.

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.

Strategic Plan

To meet the [goals established by Senate Bill 1941](#), HHSC identified 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 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 nausea and vomiting symptoms almost always begin before nine weeks of pregnancy, frequently before a woman begins prenatal care.⁹ Getting regular prenatal care beginning in the first trimester of pregnancy can help patients suffering from HG to get individualized obstetric care¹⁰ and access to timely treatment.

⁹ 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.

¹⁰ 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>

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.

Objective 1.1. Educate clinicians to recognize and treat HG.

Supports Goals:¹¹ (1) Increase awareness among state-administered program providers, [clinicians, and facilities] 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.
- **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. (5) Leverage sources of funding to support existing

¹¹ Goal numbers correspond to provisions of S.B. 1941, 87th Legislature, Regular Session, 2021.

community-based HG screening, referral, treatment, and support services.

Activities

- **Fiscal Year 2024:** Create and 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.

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.
- **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 handbook and distribute electronically 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.

Activities

- **Fiscal Year 2023:** Determine the average gestational age upon entry to prenatal care for women in Medicaid for Pregnant Women, CHIP-P, and other programs serving pregnant women.
- **Fiscal Year 2025:** Identify major barriers that delay entry into prenatal care or prevent women with HG from receiving the recommended schedule of 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

Severe nausea and vomiting can diminish a woman’s quality of life and affect her psychosocial health.¹² 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.

Activities

- **Fiscal Year 2023:** Assess current peer services available to pregnant women across the state, including existing peer support for women with HG.
- **Fiscal Year 2024:**

¹² American College of Obstetricians and Gynecologists, [Practice Bulletin 189, Nausea and Vomiting of Pregnancy](#), January 2018.

- ▶ 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.

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.

- **Fiscal Year 2024:** Evaluate the most likely referral sources for women experiencing severe nausea.
- **Fiscal Year 2025:** Distribute non-clinical educational materials to identified service providers.

Objective 2.4. Evaluate HHSC interventions for maternal health.

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.
- **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 rare but serious condition. Through the efforts detailed above, HHSC and its partners hope to ensure women with HG can get the medical, psychological, and social support they need for healthy pregnancies.

HHSC will review this strategic plan on an annual basis. These reviews will 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	Supplemental Nutrition Program for Women, Infants and Children