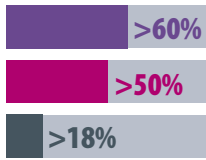


THE IMPACT OF HG

HER Collaborative Research



HG disrupts employment (>60%) and causes mood disorders (>50%) and PTSD (18%), especially when symptoms are prolonged. [Journal of Maternal-Fetal & Neonatal Medicine. 2011;24\(11\):1307-1311.](#)

[Journal of Perinatology. 2008 Mar;28\(3\):176-81.](#)
[Autonomic Neuroscience. 2017;202:73-78.](#)



Groundbreaking study shows the **nausea and vomiting hormone GDF15** is the most likely **cause** of HG. [Whole-exome sequencing uncovers new variants in GDF15 associated with hyperemesis gravidarum \[published online ahead of print, 2022 Feb 25\]. BJOG. 2022;10.](#)



Patients with HG have a **52% chance of having a child with diagnoses** such as **attention deficit disorders (ADD), autism, emotional/behavioral disorders, sensory processing disorder,** and **delays in learning, speech and**

language. [Reproductive Toxicology. 2019;84:59-64.](#)



HG runs in families suggesting a genetic component. If a sister has HG, a patient has a **17-fold increased risk** of having

it too. [American Journal of Obstetrics and Gynecology. 2011;204\(3\).](#)

Patients with hyperemesis gravidarum in the second trimester had a



more than doubled risk of preterm (<37 weeks) pre-eclampsia

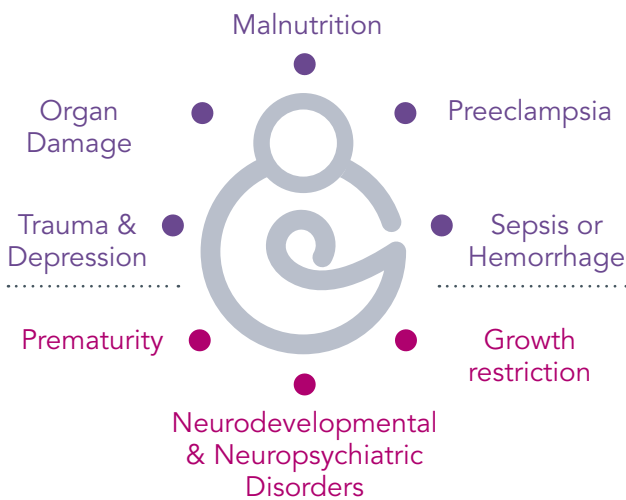
a **threefold increased risk of placental abruption**



and a **39% increased risk of a small for gestational age (SGA) birth.**

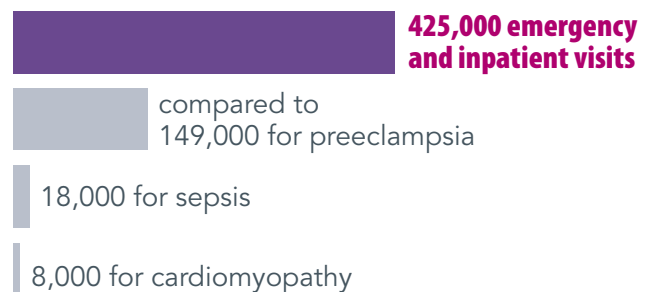
[BJOG. 2013 Apr;120\(5\):541-7.](#)

Possible HG Complications



Fetal Complications

In the USA, HG Accounts for Over



Annual Hospital Costs of HG in USA

\$679,000,000/year for inpatient hospitalization + **\$2,300,000,000/year** for emergency room visits

[HCUPnet, Healthcare Cost and Utilization Project. Agency for Healthcare Research and Quality, Rockville, MD.](#)

About HER Foundation

The Hyperemesis Education & Research Foundation (HER Foundation) is the leading global organization raising public awareness, collaborating on research, and providing education, advocacy, and support for those managing Hyperemesis Gravidarum (HG). Prior to the 1950's, Hyperemesis Gravidarum was a common cause of maternal mortality; HG is one of the most misunderstood medical problems of pregnancy despite being common. HG is one of the most misunderstood medical problems of pregnancy despite being the leading cause of hospitalization during early pregnancy and second only to preterm labor as the leading cause of hospitalization throughout pregnancy. Professionals often dismiss or fail to recognize the seriousness of HG, thus limiting or delaying treatment, contributing to the development of PTSD, anxiety, depression, suicidal ideation, and other mental health concerns that may persist decades later in at least half of patients.

HG is a pregnancy disease that may cause weight loss, debility, malnutrition, dehydration, poor mental health outcomes, and neurodevelopmental and psychiatric disorders in children. In severe cases, HG can cause maternal and fetal death. In the US, **HG accounts for over 425,000 emergency and inpatient visits compared to 149,000 for preeclampsia, 18,000 for sepsis, and 8,000 for cardiomyopathy.** Conservative estimations suggest HG costs nearly **\$678 million annually** just for inpatient hospitalization. There are also over 375,000 outpatient visits to emergency rooms for treatment of HG at an estimated cost of over **\$2.3 billion** in addition to home health care, pharmaceuticals, outpatient infusion care, diagnostics, and frequent obstetrical visits.

Maria's Story



Maria was 34 years old when she died.

Maria and her husband had a whirlwind romance, and soon she was moving to the US from her native Venezuela to get married. When they learned Maria was pregnant with twins, the couple and their families were thrilled. Hyperemesis Gravidarum (HG) changed their family love story into a devastating tragedy.

HG symptoms hit early and hard for Maria, and she was soon hospitalized with dehydration, nausea, vomiting, weight loss, electrolyte abnormalities, sepsis, malnutrition, and signs of thiamin (vitamin B1) deficiency (TD). Her family fought for her care as they watched the vibrant, 34-year-old fade away.

At 14 weeks pregnant, after five weeks of inpatient care, Maria's heart failed and she died along with her twins.

In the 21st Century, in two respected university hospitals, Maria died of profound malnutrition complicated by Wernicke's encephalopathy (swelling of her brain due to vitamin B1 deficiency), and Osmotic Demyelination Syndrome (ODS due to rapid or overcorrection of sodium). She and her twins died of preventable complications of HG. **HER seeks to eradicate preventable maternal and fetal morbidity and mortality. All mothers and babies deserve a chance at a healthy future.**

HER's Advocacy Efforts

The HER Foundation advocates for patients suffering with HG and their families through advocacy initiatives. Current and past efforts include:

- » [1Momis2Many campaign](#) and [petition](#)
- » Inclusion of provisions that support access to care for those with HG in the [Health Equity and Accountability Act \(HEAA\)](#);
- » Maternal consultation and support
- » Maternal health bills promotion
- » Health professional education
- » Clinical management resources
- » Multilingual patient education