

Hyperemesis Gravidarum

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Health

Hunter New England
Local Health District

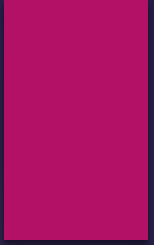
Acknowledgement of Country

We acknowledge the traditional custodians of the land on which we gather. We honour the ancestors of yesterday, the custodians of today and those of tomorrow. We recognise the continuing connection to land and waters, and how culture is held, nurtured and shared. We pay our respects.

Background

- ▶ Nausea and vomiting in pregnancy (NVP) is estimated to occur in 69%-85% of pregnancies
- ▶ Hyperemesis gravidarum (HG) is a severe form of nausea and vomiting in pregnancy which affects approximately 1.1%-3% of pregnancies (1,2)
- ▶ NVP is the symptoms of vomiting, nausea and/or retching in pregnancy not related to any other cause
- ▶ HG involves unrelenting vomiting during pregnancy, involving weight loss or other clinical signs of dehydration/starvation such as electrolyte imbalance
- ▶ HG is the main cause for hospitalisation in the first half of pregnancy
- ▶ Historically there has been a lack of a universally accepted definition of HG which has likely resulted in under diagnosis of the condition

WHY



CONSUMER ENGAGEMENT

I felt humiliated
and degraded
by this nurse

I was told "it's
just morning
sickness darl"

I had
contemplated
suicide but I
thought I was going
to die anyway

I never heard the
words
Hyperemesis
Gravidarum



I was not covered
financially, about to
lose my job. I was
forced to have a
termination

Women's experiences of Hyperemesis Gravidarum



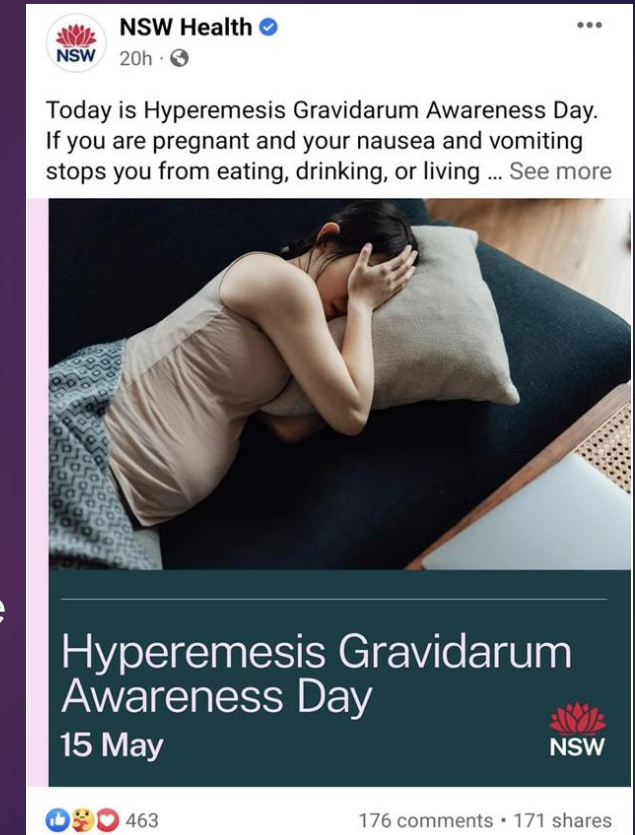
- In addition to the 15% of women experiencing HG who have had a termination because of the condition, a further 37% of women reported that they would not plan or consider any further pregnancies (3).
- A survey identified that as many as 18% of women diagnosed with HG fulfilled the criteria of PTSD. It also found women with HG were also more likely to have experienced negative postpartum life events including financial, marital, career and psychiatric problems compared to women without HG (3).

Adverse outcomes for women and neonates

Women	Neonates
• Anaemia	• Prematurity
• Pre-eclampsia	• Small for gestational age
• Eclampsia	• Low birth weight
• Hypertension in pregnancy	• Increased need for neonatal care and/or resuscitation
• Antenatal and postnatal DVT and PE	
• Increased IOL	
• Increased caesarean section	
• Electrolyte abnormalities	
• Oesophageal rupture	
• Psychological effects, including depression (5)	(Fiaschi et al, 2018)

Project Aims

- ▶ Increase clinician and consumer awareness, understanding and attitudes towards HG through the development of resources
- ▶ Implement a standardised diagnostic tool
- ▶ Ensure consistent treatment and support for women experiencing NVP/HG (care plans/pathways). This includes Primary Health Care
- ▶ Scope, implement and evaluate pilot models of care in HNELHD
- ▶ Establish and improve data collection methods to ensure accurate reporting of cases



The image is a screenshot of a Facebook post from the official NSW Health page. The post is dated 20 hours ago and features a photograph of a pregnant woman lying on a couch, resting her head on a pillow with her hands covering her face, suggesting she is experiencing severe nausea. Below the photo is a dark green banner with white text that reads "Hyperemesis Gravidarum Awareness Day 15 May" and includes the NSW Health logo. At the bottom of the post, there are icons for likes, comments, and shares, with a total of 463 likes and 171 shares.

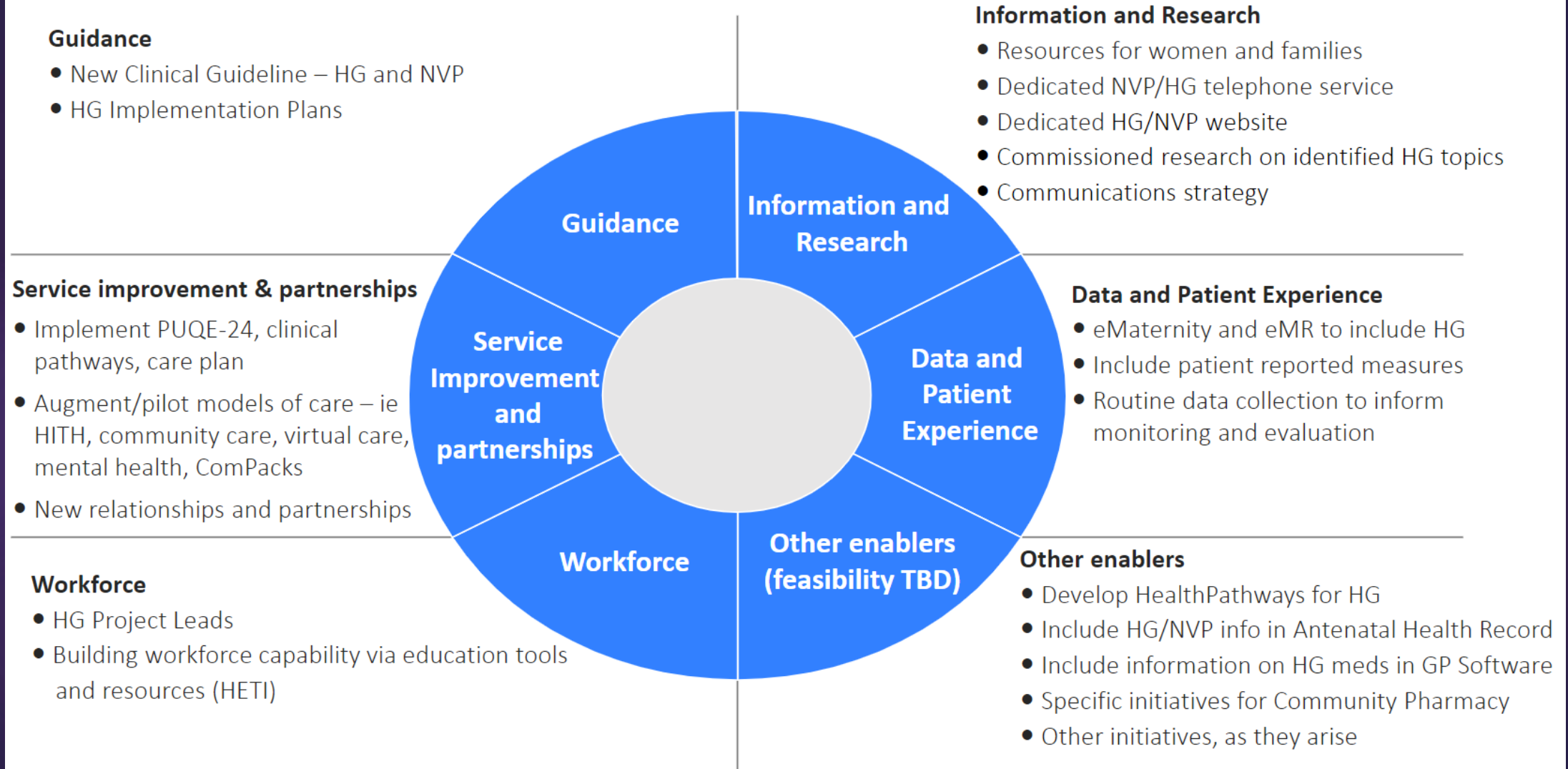
NSW Health 20h · 🌐

Today is Hyperemesis Gravidarum Awareness Day. If you are pregnant and your nausea and vomiting stops you from eating, drinking, or living ... See more

Hyperemesis Gravidarum Awareness Day
15 May

463 176 comments · 171 shares

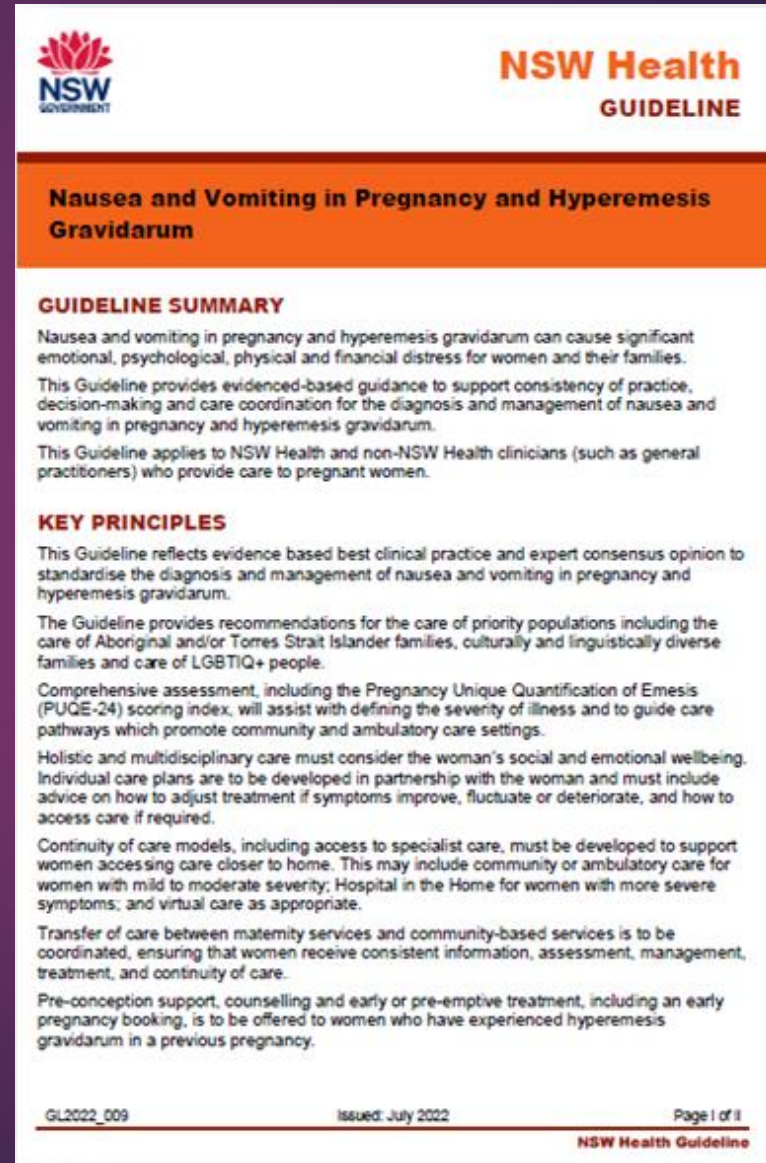
Planned activities for the HG Initiative



Comprehensive NSW Health Guideline

- ▶ Newly published NSW Health Guideline
- ▶ Provides evidence-based guidance to support consistency of practice, decision-making and care coordination for the diagnosis and management of NVP/HG
- ▶ Freely accessible reference available at:

https://www1.health.nsw.gov.au/pds/ActivePDSDocuments/GL2022_009.pdf



The image shows the cover page of a NSW Health Guideline. At the top left is the NSW Government logo. At the top right is the text 'NSW Health GUIDELINE'. Below this is a dark blue header with the title 'Nausea and Vomiting in Pregnancy and Hyperemesis Gravidarum' in white. The main content area is white with a dark blue border. It contains sections for 'GUIDELINE SUMMARY', 'KEY PRINCIPLES', and a footer with the document ID 'GL2022_009', the issue date 'Issued: July 2022', and the page number 'Page 1 of 11'. The footer also includes the text 'NSW Health Guideline'.

NSW Health
GUIDELINE

Nausea and Vomiting in Pregnancy and Hyperemesis Gravidarum

GUIDELINE SUMMARY

Nausea and vomiting in pregnancy and hyperemesis gravidarum can cause significant emotional, psychological, physical and financial distress for women and their families.

This Guideline provides evidenced-based guidance to support consistency of practice, decision-making and care coordination for the diagnosis and management of nausea and vomiting in pregnancy and hyperemesis gravidarum.

This Guideline applies to NSW Health and non-NSW Health clinicians (such as general practitioners) who provide care to pregnant women.

KEY PRINCIPLES

This Guideline reflects evidence based best clinical practice and expert consensus opinion to standardise the diagnosis and management of nausea and vomiting in pregnancy and hyperemesis gravidarum.

The Guideline provides recommendations for the care of priority populations including the care of Aboriginal and/or Torres Strait Islander families, culturally and linguistically diverse families and care of LGBTIQ+ people.

Comprehensive assessment, including the Pregnancy Unique Quantification of Emesis (PUQE-24) scoring index, will assist with defining the severity of illness and to guide care pathways which promote community and ambulatory care settings.

Holistic and multidisciplinary care must consider the woman's social and emotional wellbeing. Individual care plans are to be developed in partnership with the woman and must include advice on how to adjust treatment if symptoms improve, fluctuate or deteriorate, and how to access care if required.

Continuity of care models, including access to specialist care, must be developed to support women accessing care closer to home. This may include community or ambulatory care for women with mild to moderate severity; Hospital in the Home for women with more severe symptoms; and virtual care as appropriate.

Transfer of care between maternity services and community-based services is to be coordinated, ensuring that women receive consistent information, assessment, management, treatment, and continuity of care.

Pre-conception support, counselling and early or pre-emptive treatment, including an early pregnancy booking, is to be offered to women who have experienced hyperemesis gravidarum in a previous pregnancy.

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NSW Health Guideline

Diagnostic tool – PUQE 24

(Pregnancy Unique Quantification of Emesis)

Mild: PUQE-24: 4 - 6 Moderate: PUQE-24: 7 - 12 Severe: PUQE-24: \geq 13				
1. In the last 24 hours, how long have you felt nauseated or sick to your stomach?				
Not at all (1)	1hour or less (2)	2-3hours (3)	4-6hours (4)	>6hours (5)
2. In the last 24 hours, have you vomited or thrown-up?				
I did not vomit (1)	1-2 times (2)	3-4 times (3)	5-6 times (4)	7 or more times (5)
3. In the last 24 hours, how many times have you had retching or dry heaves without throwing up?				
None (1)	1-2 times (2)	3-4 times (3)	5-6 times (4)	7 or more times (5)

Psychosocial screening with a validated tool is required for women who present with mild, moderate or severe nausea and/or vomiting in pregnancy or hyperemesis gravidarum. Make appropriate referrals and repeat as necessary

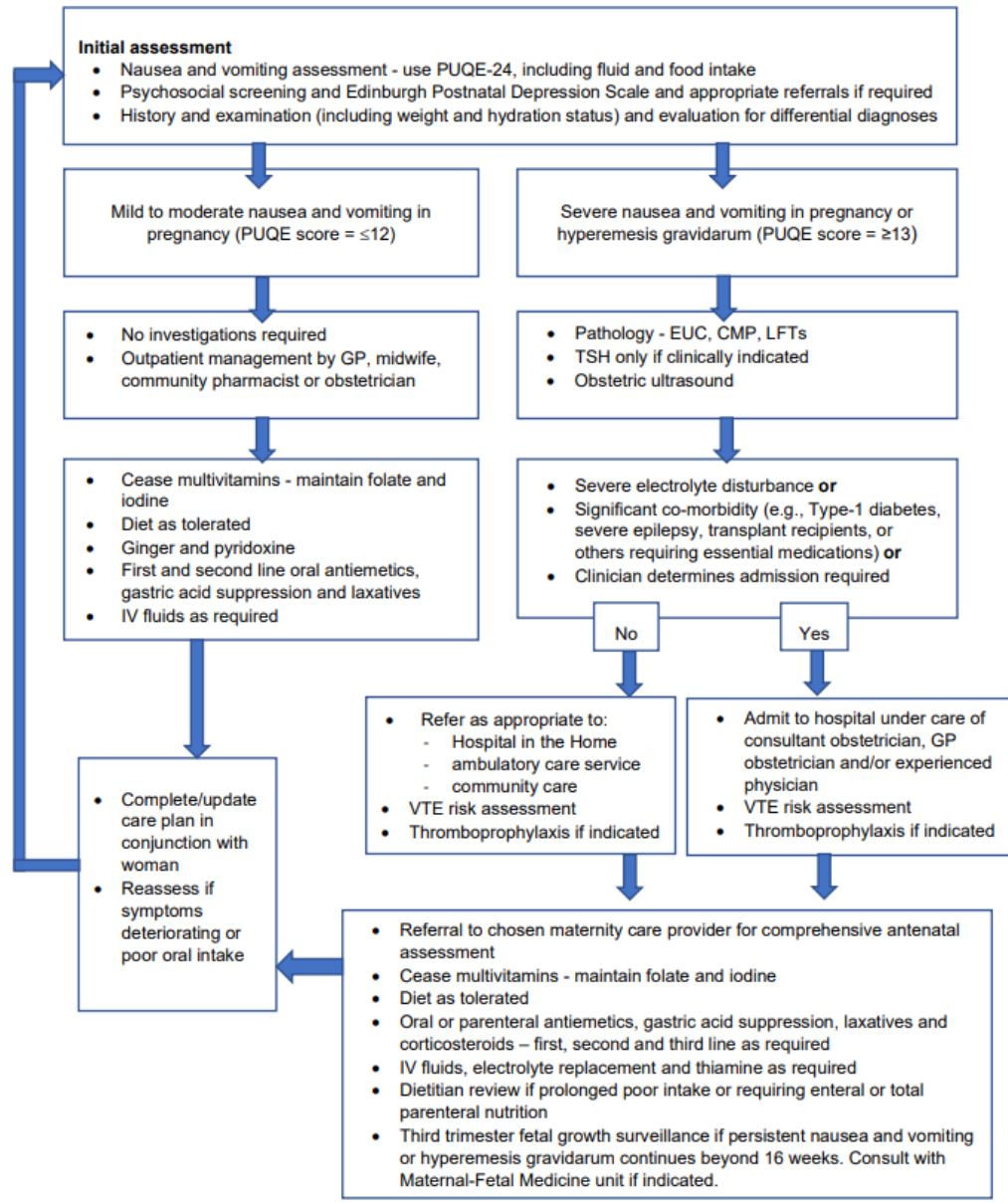
Pharmacological Management

10.3.2. Appendix 3.2: Prescribing summary

	Mild PUQE-24 = <7	Moderate PUQE-24 = 7 to 12	Severe (PUQE-24 = ≥13) or hyperemesis gravidarum – Outpatient management	Refractory symptoms or in hospital
Antiemetics and corticosteroids (see 10.3.3)	<ul style="list-style-type: none"> ginger and/or <ul style="list-style-type: none"> pyridoxine (vitamin B6) 	One of the following: <ul style="list-style-type: none"> doxylamine (plus pyridoxine) metoclopramide prochlorperazine promethazine diphenhydramine or <ul style="list-style-type: none"> ondansetron (plus laxative/s) 	<ul style="list-style-type: none"> ondansetron (plus laxative/s) And consider night-time dosing with either: <ul style="list-style-type: none"> doxylamine (plus pyridoxine) or cyclizine or metoclopramide or promethazine or prochlorperazine If significant symptoms persist: <ul style="list-style-type: none"> consider corticosteroids: prednisone/prednisolone or methylprednisolone or hydrocortisone consider droperidol 	As for severe nausea and vomiting in pregnancy or hyperemesis gravidarum Convert to parenteral treatment if not tolerating oral Convert back to oral equivalent when suitable
Laxatives	Docusate 120mg oral once or twice a day ³ and/or macrogol oral once or twice a day ³ and/or lactulose 15 to 30mL oral once or twice a day ³			
Acid suppression (see 10.3.4)	-	H2 antagonist: <ul style="list-style-type: none"> famotidine or nizatadine (if unavailable use a proton pump inhibitor)	Cease H2 antagonist and commence proton pump inhibitor: <ul style="list-style-type: none"> esomeprazole or rabeprazole or omeprazole or lansoprazole 	Continue proton pump inhibitor IV if oral not tolerated: <ul style="list-style-type: none"> esomeprazole or pantoprazole or omeprazole
Intravenous (IV) therapy (see 10.3.5)	-	IV fluids 1 to 3 times per week as required Add IV thiamine if poor oral intake or administering glucose		Continuous IV fluid and electrolyte replacement - add IV thiamine if poor oral intake or administering glucose
Additional therapies	-	-	Consider enteral nutrition VTE prophylaxis if indicated	Consider enteral or total parenteral nutrition AND VTE prophylaxis if indicated

Management Flowchart

10.1. Appendix 1: Assessment and management flowchart



NSW Health website and Consumer Factsheet

NSW Health Fact sheet

Hyperemesis gravidarum

Nausea and vomiting in pregnancy and hyperemesis gravidarum

What is nausea and vomiting in pregnancy (NVP)?

Many pregnant women feel sick (nauseated) and/or may vomit during early pregnancy. This can vary from mild to moderate and still be considered part of the normal experience of pregnancy. People used to call this "morning sickness" but we now refer to it as nausea and vomiting in pregnancy, or NVP.

In mild and moderate NVP women are still able to eat and drink. Around 7 in 10 pregnant women will experience NVP but they usually feel better after the first trimester.

What is hyperemesis gravidarum (HG)?

When nausea and vomiting become severe, lasting for more than a few days, women will find it hard to eat or drink enough. This severe NVP is called hyperemesis gravidarum (HG). Around 1 in 100 pregnant women will experience HG, although this number may be higher. It may lead to dehydration (lack of fluid in the body) and acute weight loss and vitamin deficiencies.

HG usually starts early in pregnancy, before women are 10 weeks pregnant. For most women, HG stops between 13 to 20 weeks, while a few women have HG their entire pregnancy.

HG can have a big impact on women's emotional, mental and physical health. Women are often so sick they cannot go to work, care for themselves or anyone else, and have great difficulty participating in normal daily activities.

HG can make women feel very tired and needs to be taken seriously by their health care provider, families and support people and employers.



NSW Health - Nausea and vomiting in pregnancy and hyperemesis gravidarum Page 1 of 4

NSW Health Fact sheet

Hyperemesis gravidarum

Common to morning sickness

You may feel sick or vomit between 4 and 16 weeks of your pregnancy, but not usually to the extent that it disrupts your life. You can normally keep some food and water down over the course of the day.

Hyperemesis gravidarum (HG)

You vomit a lot and find it hard to eat or drink anything, and to keep food down. For some women, it is a constant cycle of feeling unwell and being sick for weeks and even months. Vomiting can ease and then return during the pregnancy for some women.

Vomiting

You won't normally lose much weight in pregnancy. It's more common that you will gain rather than lose weight.

Weight loss

You may lose weight from being so unwell, and unable to keep enough food and/or fluids down.

Tiredness

You feel exhausted from constant sickness and are unable to do any other tasks, go to work or care for others. Sleeping properly can be a problem. Sometimes you may struggle to look after yourself.

Dehydration

You won't normally suffer from dehydration in most pregnancies. You can drink enough fluids to stay hydrated.

You may suffer dehydration from loss of fluids. You may need to go to hospital for treatment with medications and fluids.

Nausea

It can be common to have moments of nausea in the first trimester, but it's manageable and shouldn't cause too much discomfort. Fluids and rest can help relieve the symptoms.

Nausea and/or vomiting severely impacts your daily life. Some women with HG find these symptoms stop after a few weeks, others may have these for their entire pregnancy.

Anxiety, depression and isolation

Women who have HG, and have been unwell and tired for a while, can often feel very isolated, anxious and depressed. You may find it hard to cope and cannot enjoy your pregnancy. You may be afraid to plan future pregnancies due to the symptoms you have had.

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NSW Health Fact sheet

Hyperemesis gravidarum

How do I know if I have HG?

If you are experiencing nausea and/or vomiting, which is interrupting your ability to eat and/or drink, you should speak to your health care provider. They may ask you questions about how you have been feeling over the past 24 hours. The "PUQE-24" scoring system below shows how they will rate your responses, to understand how severe your nausea and/or vomiting has been.

If your PUQE-24 score is:

- between 4 - 6, you have mild NVP
- between 7 - 10, you have moderate NVP
- > 10, you have severe NVP (also known as HG).

PUQE-24 Score

1. In the last 24 hours, for how long have you felt nauseated or sick to your stomach?

Not at all (0)	1 hour or less (1)	2-3 hours (2)	4-6 hours (3)	More than 6 hours (4)
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2. In the last 24 hours how many times did you vomit or dress up?

I did not vomit (0)	1-2 times (1)	3-4 times (2)	5-6 times (3)	7 or more times (4)
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3. In the last 24 hours, how many times have you had retching or dry heaves without throwing up?

None (0)	1-2 times (1)	3-4 times (2)	5-6 times (3)	7 or more times (4)
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HG is a real and debilitating medical condition, and it is important that you are listened to and get the treatment you need.

Based on your responses to the questions, your health care provider will suggest how to manage your sickness. If you have mild or moderate levels of nausea and vomiting, you do not usually need any other tests, however you may be offered some treatment for your symptoms.

If you have severe NVP or HG, your pregnancy care provider should do further tests, such as blood or urine tests. These tests will look for the cause of your nausea and vomiting and see how dehydrated you are. The results of the tests will help guide your treatment.

What is causing my HG?

The first thing to know is that nothing you do or have done has caused HG. It's not you or your partner's fault and it does not mean there is anything wrong with your baby or your pregnancy. The exact cause of HG is not known but there are current theories on what the cause may be. So far we know that HG can occur more in some families. If you had severe sickness and vomiting in a previous pregnancy, you may be more likely to experience it again in later pregnancies. It seems to occur more often in women being treated for bipolar, however it definitely affects women who are pregnant with one baby too.

Where can I get help for my nausea and vomiting?

If you are suffering from NVP or think you may have HG, you should see your pregnancy care provider, such as your midwife, family doctor or obstetrician. If you are feeling very unwell you should go to the Emergency Department at your local hospital for advice and help.

Symptoms of nausea and vomiting can become harder to control the longer you are suffering. We encourage you to see your pregnancy care provider as soon as possible when you feel that:

- you are having difficulty eating or drinking because of the nausea and/or vomiting
- you are not able to cope alone at home.

Unfortunately, HG is often not always recognised quickly, so don't be afraid to ask any questions about your health during pregnancy.

NSW Health - Nausea and vomiting in pregnancy and hyperemesis gravidarum Page 1 of 4

NSW Health Fact sheet

Hyperemesis gravidarum

How is NVP and HG treated?

There is a lot of help available to ease your symptoms during pregnancy. Your pregnancy care provider will develop a treatment plan with you based on your symptoms and their severity. Sometimes the nausea and vomiting cannot be stopped completely. The aim of treatment is to reduce your symptoms enough to allow normal daily activities, especially eating and drinking.

If you have mild or moderate NVP, your health care provider may suggest:

- changing your activities to get more rest
- eating small amounts of food more often
- drinking small amounts of fluid more often
- staying hydrated
- avoiding caffeine which can dehydrate you
- anti-sickness (antiemetic) medication
- gabapentin (Neurontin)
- vitamin B6 (Vitamin B1) tablets by a drip.

If you have severe NVP, or you are dehydrated, your health care provider may suggest:

- anti-sickness (antiemetic) medication
- IV fluids
- other types of treatment and care, depending on your needs.

Some women need to be seen at the hospital or they may need to be admitted into hospital if you do not respond to medication, you are losing weight or can't keep enough food down and become dehydrated.

Are medications safe to use in pregnancy?

Anti-sickness (antiemetic) medicine may be needed if your symptoms are not going away and are severe. You may be worried about taking medicines while you are pregnant. The medicines that health professionals recommend are considered safe and have been used for many years to treat nausea and vomiting in pregnancy. For some women, medication may be needed for several weeks or even months until symptoms settle.

Never take any medication without discussing it with your GP, obstetrician, community pharmacist or midwife.

Does HG and nausea and vomiting in pregnancy affect the baby?

Your baby gets its food from your body even though you may not be eating much when feeling unwell or vomiting. If you become dehydrated it could affect your baby so it's important you receive treatment and fluids. Some babies of women with HG may have a low birth weight when born. However, not all babies born to women with HG have a low birth weight.

Mothersafe

Mothersafe is a free telephone service for the women of NSW that can provide counselling and advice on medications to support nausea and vomiting in pregnancy.

Call 1800 647 948 or search "Mothersafe NSW" for more information.



For further pregnancy support, contact your pregnancy care provider (GP, obstetrician or midwife) or visit www.health.nsw.gov.au/having-a-baby

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www.health.nsw.gov.au/HG

10.4. Appendix 4: Care Plan Template

Care Plan

Nausea and vomiting in pregnancy and Hyperemesis gravidarum

Date:

My care providers (names/roles/contact numbers):

Patient label

Next clinical review:

My medications

Medication	Morning	Middle of day	Evening	Bedtime
For nausea, vomiting or retching				
For stomach acid (reflux)				
For constipation				
Others (including vitamins and minerals)				

If I feel worse, I could try:

If I feel better, I could try:

Please complete before your next appointment

Eating and drinking:

What makes it better or worse? How much are you having each day?

Family, friends and supports:

What support do you have? Are your caregiving responsibilities being affected?

Work, study and social activities:

Have you had to stop or reduce any activities?

Mood and sleep:

How are you feeling? What is your sleep like?

Treatment and medications:

Have any treatment or medication worked well for you?

Pilot Projects & Research

- ▶ Funding application successful for 3 pilot projects
 - ▶ 3 differing models of care for women to receive access to care for hyperemesis gravidarum outside of the ED
 - ▶ 3 different models of care in 3 different sectors of the LHD (Greater Newcastle Sector, Hunter Valley Sector, Tablelands Sector)
 - ▶ 3 Pilot projects to run for 12-18 months
- ▶ Ethics application in progress to collect qualitative and quantitative data
 - ▶ Hoping to see a reduction in re-presentations to ED following implementation of pilot models of care
 - ▶ Following completion of pilot projects can compare outcomes of different models of care using PREMS and PROMS

Pilot Project 1 - Lower Hunter Sector

AIM – Provide women with IVF rehydration outside of the hospital setting

Population/location – Lower Hunter Sector. Maitland.

Key stakeholders

- ▶ Maitland Hospital in The Home service (HiTH)
- ▶ Maternal Services Maitland Hospital
- ▶ Emergency Department Maitland Hospital
- ▶ Primary Health Network (PHN)
- ▶ Consumers

Deliverables

- ▶ Develop a care plan for the care of women in the HiTH service
- ▶ Develop referral pathways for ED, GP's, Obstetricians and Midwives to be able to refer into the service
- ▶ Provide resources for HiTH to be able to provide this service (pumps, scales etc)
- ▶ Provide education for HiTH staff
- ▶ Facilitate the use of virtual care for HiTH staff

Pilot Project 2 – Greater Newcastle Sector

AIM – Provide women with IVF rehydration outside of the ED setting

Population/location – Greater Newcastle Sector. John Hunter Hospital.

Key stakeholders

- ▶ John Hunter MADU (Maternity Assessment Day Unit)
- ▶ Maternal Services John Hunter Hospital
- ▶ Emergency Department John Hunter Hospital
- ▶ Primary Health Network (PHN)
- ▶ Consumers

Deliverables

- ▶ Develop a clinical guideline for the care of women in the MADU service
- ▶ Develop referral pathways for ED, GP's, Obstetricians and Midwives to be able to refer into the service
- ▶ Provide FTE for the service to be able to implement the model of care
- ▶ Provide education for MADU staff

Pilot Project 3 – Tablelands Sector

AIM – Provide women with IVF rehydration outside of the ED setting

Population/location – Tablelands Sector. Armidale.

Key stakeholders

- ▶ Maternal Services Armidale Hospital
- ▶ Emergency Department Armidale Hospital
- ▶ Primary Health Network (PHN)
- ▶ Consumers

Deliverables

- ▶ Develop a clinical guideline for the care of women in the Outpatient Birthing Unit service
- ▶ Develop referral pathways for ED, GP's, Obstetricians and Midwives to be able to refer into the service
- ▶ Provide education for Birthing Unit staff
- ▶ Provide FTE for the service to be able to implement the model of care

References

1. **NSW Health.** Nausea and Vomiting in Pregnancy and Hyperemesis Gravidarum GL2022_009
2. **McParlin et al.** Treatments for Hyperemesis Gravidarum and Nausea and Vomiting in Pregnancy: A Systematic Review. *JAMA*. 2016, Vol. 13
3. **Havnan, G. C., Truong, M. B., Do, M. H.** *Women's perspectives on the management and consequences of hyperemesis gravidarum-a descriptive interview study.* Scandinavian Journal of Primary Health Care. 2019, Vol. 37.
4. **Fiaschi L, Nelson-Piercy C, Gibson J, Szatkowski L & Laila J.** *Adverse Maternal and Birth Outcomes in Women Admitted to Hospital for Hyperemesis Gravidarum: a Population-Based Cohort Study.* Paediatric and Perinatal Epidemiology. 2018, Vol. 32.