National Women & Infants Health Programme

QUICK SUMMARY DOCUMENT

# Hyperemesis Gravidarum and Nausea/Vomiting in Pregnancy

**This QSD is a resource for all clinicians working in healthcare in Ireland who are involved in the care of women with nausea and vomiting of pregnancy (NVP) and hyperemesis gravidarum (HG).**

Following a comprehensive literature review a number of evidence-based recommendations for management of NVP and HG were agreed upon.

## Key Recommendations

### Definitions and Diagnosis

1. We recommend nausea and vomiting in pregnancy (NVP) be defined as nausea, vomiting and/or dry retching caused by pregnancy, with symptoms commencing in the first trimester without an alternate diagnosis.
2. We recommend that hyperemesis gravidarum can be diagnosed when there is onset of severe nausea and/or vomiting in early gestation (before 10-16 weeks' gestation) that affects ability to eat and drink normally and strongly limits activities of daily living, considering clinical picture and potential differential diagnoses. Signs of dehydration should be considered but are not necessary for diagnosis.
3. We recommend that the Pregnancy-Unique Quantification of Emesis (PUQE) scoring system is used to assess severity of nausea and vomiting in pregnancy (NVP) symptoms, alongside a thorough history.

### Initial Assessment and Investigations

4. We recommend ultrasound assessment at the appropriate timing by trained staff to outrule multiple pregnancy and molar pregnancy.
5. We recommend that a hydration assessment should be conducted, including fluid balance in the past 24 hours, urine colour and clinical signs of dehydration. Urine specific gravity may be considered.
6. We do not recommend the use of ketonuria to assess hydration.

### Fluid and Electrolyte Management

7. We recommended considering intravenous (IV) provision of fluid and electrolytes if the woman cannot tolerate oral intake
8. We recommend caution if using dextrose-containing intra-venous (IV) fluids due to the risk of thiamine deficiency, refeeding syndrome and Wernicke's encephalopathy

### Inpatient vs Outpatient Management and Risk Prevention

9. We recommend that consideration is given for inpatient versus outpatient management based on severity of symptoms, clinical risks, comorbidities, preferences of the woman and available resources.
10. We recommend regular assessment for risk factors for venous thromboembolism and consideration of thromboprophylaxis in accordance with venous thromboembolism guidelines. All patients admitted for management of hyperemesis gravidarum (HG) should have a risk assessment performed.
11. We recommend that pregnant women with persistent hyperemesis gravidarum (HG) should have regular fetal growth assessment, with at least one formal ultrasound to assess fetal growth in the third trimester.

### Medical Management

12. We recommend that medical management is a cornerstone of the treatment of hyperemesis gravidarum (HG) and moderate-severe nausea and vomiting in pregnancy (NVP) (see algorithm).
13. We recommend that women should be encouraged to return for review if medications are not effective as they can be reassessed.
14. We recommend that if a woman is not responding to the medication, consider additional or changes as needed. More than one agent may be required.
15. We recommend avoiding the use of more than one medication from the same therapeutic class to prevent side effects.
16. We recommend a regular review of medications with consideration to stopping, reducing or restarting prescriptions as needed based on symptoms. Consider discontinuing any medication that is not effective for the woman, or that is causing significant side effects or complications.

### Refeeding Syndrome Risk

17. We recommend that individual assessment for and management of refeeding syndrome is completed for women with HG, following national or local policies.
18. We recommend that electrolytes (at least potassium, magnesium, and phosphate) are measured and deficiencies are replaced as needed.
19. We recommend that Thiamine supplementation should be provided to: women admitted (day case or inpatient) with HG; those with severe vomiting; those with limited nutritional intake for at least 5 days; and/or weight loss >10% from pre-pregnancy weight. This can be provided as 250 mg IV thiamine (Pabrinex®) daily for up to 3 days; or 200-300 mg oral thiamine supplement for 10 days.

### Nutrition Support

20. We recommend that the need for dietitian referral for comprehensive nutrition assessment should be considered for those presenting with hyperemesis gravidarum (HG).
21. We recommend that in appropriate settings, enteral and parenteral nutrition should be considered alongside optimisation of medical management when oral methods (food fortification, oral nutritional supplements, and dietary strategies) are not sufficient to maintain nutritional status, considering the preferences of the woman and potential complications.
22. We recommend that enteral or parenteral nutrition should not be considered in inappropriate settings such as those without adequate equipment, training, policies or protocols for initiation and monitoring of feeding.
23. We recommend a multi-disciplinary approach led by the consultant obstetrician when enteral or parenteral nutrition is considered.
24. We recommend that clinical judgement should guide decisions about the timing of initiation or the duration of feeding. It is prudent to consider early initiation to minimise potential nutritional losses in pregnancy.

### Supplementation and Iron Management

25. We recommend that key single-nutrient supplementation should be recommended to all women throughout pregnancy. This includes folic acid (400µg/day) and vitamin D (15µg/day) at a minimum. Beyond this, an individualised approach should be taken with consideration of additional individual nutrient supplements or pregnancy multivitamins as appropriate, including iron-free formulations or products such as liquid, gummies and sprays.
26. We recommend consideration on an individual basis of temporarily ceasing iron supplementation including multivitamins containing iron due to their potential to exacerbate nausea and vomiting symptoms.
27. We recommend a prudent approach to alternative preparations such as IV infusions and consideration of their use in women with iron deficiency anaemia and HG.

### Constipation Management

28. We recommend that women with hyperemesis gravidarum (HG) and constipation are counselled on lifestyle interventions for constipation including meeting dietary fibre recommendations (28g/day); maintaining hydration; engaging in regular physical activity and correct positioning when using the toilet.
29. We recommend that use of laxatives, via the oral or rectal route where appropriate, is considered (including bulk-forming, osmotic, and stimulants).

### Diabetes and Endocrine Considerations

30. We recommend that the impact of nausea and vomiting in pregnancy (NVP) on blood glucose control in women with pre-gestational diabetes should be discussed as part of pre-conceptional counselling.
31. We recommend an individualised approach to management for women with pre-gestational diabetes throughout the course of pregnancy including close monitoring and collaborative multi-disciplinary care including input from endocrinology.
32. We recommend that women with type 1 diabetes should be given blood ketone testing equipment and advised to assess for ketonaemia when unwell ("sick day rules").
33. We recommend that women with insulin-requiring diabetes or who are on pharmacological treatment should contact their diabetic service if vomiting. A low threshold for admission is recommended for women with insulin-requiring diabetes and NVP.
34. We recommend that diabetic ketoacidosis should be suspected in all women with diabetes presenting with vomiting and hyperglycaemia.
35. We recommend that measurement of tyroid function tests (TFTs) should be reserved for those with severe nausea and vomiting in pregnancy (NVP) or hyperemesis gravidarum (HG) or those with overt symptoms or signs of hyperthyroidism. Those with supressed thyroid stimulating hormone (TSH) should have further investigation for the underlying cause and appropriate referral to endocrinology services.

### Psychological and Trauma-Informed Care

36. We recommend that women with hyperemesis gravidarum (HG) are routinely and periodically screened for emotional distress during and after pregnancy using validated measures and referred on to appropriate supports as needed with consent. Where indicated psychiatric assessment and intervention should be offered.
37. We recommend that clinicians consider a differential diagnosis between hyperemesis gravidarum (HG) and eating disorder-related vomiting. Provide appropriate level of care for such diagnoses (hyperemesis gravidarum, eating disorder or diagnosis of both hyperemesis gravidarum and an eating disorder).
38. We recommend that trauma sensitive staff training should be considered for staff interacting with women experiencing hyperemesis gravidarum (HG). In cases where clinicians do not have access to such training management should be informed so that funding can be obtained, and trauma sensitive training prioritised.

### Delivery and Termination Considerations

39. Hyperemesis gravidarum (HG) alone is not an indication for early delivery or induction of labour, however an individualised approach taking the woman's preferences into account is recommended.
40. We recommend that the request for Termination of Pregnancy (TOP) should be reviewed by the appropriate members of the multidisciplinary team considering the legal criteria for TOP, the clinical situation, the best interests of the woman and her wishes. It is also important to recognise that under the 2018 Termination of Pregnancy Act women are entitled to a termination under 12 weeks without giving a reason for their decision.

## Algorithm

## Algorithm 1: Management of Nausea/Vomiting in Pregnancy

**Mild NVP** according to modified PUQE-24 score <6, no comorbidities or clinical risks – manage at point of care

- Advise on dietary management, adequate fluid intake, comfort measures and supports as needed. Encourage oral fluids and dietary intake of small, frequent amounts of preferred foods
- Provide appropriate supportive materials such as dietary information leaflets.
- Consider prescription of first line oral anti-emetic, particularly if symptoms are affecting intake or quality of life.
- Consider the psychological impact of prolonged nausea or vomiting. Provide psychological support and offer referral to local perinatal mental health services for ongoing support as needed.
- If weight loss, dehydration, or co-morbidities, manage according to the below.

**Moderate or Severe NVP (PUQE-24 score 7-12 or ≥13)** or any severity of symptoms alongside any of the following conditions:

- weight loss
- clinical signs of dehydration
- on oral medications with low therapeutic window e.g. anti-epileptic medication, anti-retroviral, immunosuppression where there is concern regarding ability to tolerate oral medication)

Consult obstetric team and manage in day care unit or as per clinical judgement.

**Severe NVP (PUQE-24 score ≥13)** or unwell moderate NVP, may need to be managed as an inpatient. Management should be as per mild with the additional considerations for offering serial growth scans, hydration, management of complications and referral to supportive services as needed.

**Severe NVP (PUQE-24 score ≥13)** not suitable for daycase management, HG, significant medical comorbidity including insulin dependent diabetes – admit as inpatient

**Criteria for discharge from inpatient care**

- Tolerating oral intake and oral medications
- Appropriate antiemetic prescription provided
- Patient given information leaflet on diet and lifestyle management (see Appendix 4) and aware when to return to the hospital if situation changes
- On discharge from hospital arrange follow-up antenatal care to include monitoring of weight, nutritional status and fetal growth restriction and follow up appointments on the day ward as needed.

## Algorithm 2: NVP Treatment Algorithm

**If there is no improvement, proceed to the next step**

Use of this algorithm assumes that other causes of nausea and vomiting in pregnancy have been ruled out.

Doxylamine 10mg and pyridoxine 10mg prolonged release: one capsule in the morning, one in the afternoon and two at bedtime). Adjust schedule and dose according to severity of symptoms.

**Add either:**

Ondansetron 4 to 8mg 8 hourly PO or (Zofran Zydis®) 4 to 8mg 8 hourly buccal (counsel the woman on safety data)

*Or/And*

Prochlorperazine (Stemetil®) 5mg 8 hourly PO†‡ or (Buccastem®) 3mg 12 hourly buccal

*Or/And*

Cyclizine (Valoid®) 50mg 8hourly PO‡

**No Dehydration**

If not tried previously, add any of the following:

- Promethazine (Phenergan®) 25mg up to 8 hourly PO
- Chlorpromazine 10-25 mg 6 hourly PO

**Dehydration**

Start IV fluid replacement with Hartmann's solution or NaCl 0.9%. **If not tried previously**, add any of the following:

- Ondansetron 4mg to 8mg 8 hourly IV*
- Prochlorperazine 12.5mg 8 hourly IM *
- Metoclopramide 5 to 10mg 8 hourly IV*
- Promethazine 12.5 to 25mg 8 hourly IM*

**Consider:** Hydrocortisone 100mg 12 hourly IV* change to oral Prednisolone, 40-50 mg/day PO. Taper the dose of steroids gradually until the lowest maintenance dose controlling the symptoms is reached. Given risks of long-term steroid use, seek senior advice.

**Note**:

- Don't use two medications which are in the same drug class
- At any stage women may require Omeprazole 20mg once daily for the management of dyspepsia or gastro-oesophageal reflux. Dose can be increased if necessary.
- Consult Summary of Product Characteristics for full prescribing data.

‡ Women should be warned of increased sedative effects possible with combination treatment.

† Extrapyramidal effects and oculogyric crises may occur with prochlorperazine.

*Only use parenteral formulations if oral products are not tolerated.

VTE risk assessment must be performed as per national clinical guidelines.

IV vitamin supplementation Pabrinex I/II® or equivelant daily for up to 3 days in women admitted (day case or inpatient) with HG; those with severe vomiting; those with limited nutritional intake for at least 5 days; and/or weight loss >10% from pre-pregnancy weight. If oral medications tolerated: Thiamine Hydrochloride 50-100mg up to 8hourly PO

Consider need for IV potassium replacement (use ready-mix bottles of NaCl 0.9% with 20mmol or 40 potassium per litre). If any abnormal electrolyte value is detected, please see Irspen Refeeding syndrome guidelines for correction (Appendix 4)

Parenteral nutrition may be required.

## Auditable standards

Audit using the key recommendations as indicators should be undertaken to identify where improvements are required and to enable changes as necessary, and to provide evidence of quality improvement initiatives.

Auditable standards for this guideline include:

1. Calculation and documentation of PUQE score of women attending care for treatment of nausea and vomiting (initial and subsequent presentations or daily on ward).
2. Assessment of medication prescribing practices with reference to the treatment algorithm.
3. Appropriate ultrasound Scans, bloodwork, correction of electrolyte imbalances, VTE assessments, fluid replacement, and intake/output assessment.
4. Number of women with NVP and HG attending the perinatal mental health team.
5. Number of attendances per patient to ED, Day Ward, inpatient admissions, and outpatient appointments

Where electronic health records are available, collaboratively developed routine reports should be used to describe and audit the management of this population.

## Recommended reading:

1. Health Service Executive (2025), National Centre for Clinical Audit Nomenclature - Glossary of Terms, National Quality and Patient Safety Directorate. https://assets.hse.ie/media/documents/HSE_National_Centre_for_Clinical_Audit_Nomenclature_2025.pdf
2. HSE National Framework for developing Policies, Procedures, Protocols and Guidelines How_to_Develop_HSE_National_Policies_Procedures_Protocols_and_Guidelines_gQBQ4os.pdf
3. Jansen LAW, Koot MH, van't Hooft J, Dean CR, Bossuyt PMM, Ganzevoort W, et al. The windsor definition for hyperemesis gravidarum: A multistakeholder international consensus definition. Eur J Obstet Gynecol Reprod Biol. 2021;266:15-22. DOI: 10.1016/j.ejogrb.2021.09.004
4. Nelson-Piercy C, Dean C, Shehmar M, Gadsby R, O'Hara M, Hodson K, et al. The Management of Nausea and Vomiting in Pregnancy and Hyperemesis Gravidarum (Green-top Guideline No. 69). BJOG: An International Journal of Obstetrics & Gynaecology. 2024;131(7):e1-30. DOI: 10.1111/1471-0528.17739
5. Lowe S. SOMANZ guideline for management of nausea and vomiting in pregnancy and hyperemesis gravidarum. Aust New Zealand J Obstet Gynaecol. 2019;59 ((Lowe S.) University of Sydney, NSW,):108-9. https://www.somanz.org/content/uploads/2020/07/NVP-GUIDELINE-1.2.20-1.pdf
6. Ramin SM. ACOG PRACTICE BULLETIN No. 189 SUMMARY: Nausea and Vomiting of Pregnancy. Obstet Gynecol. 2018;131(1):190-3. DOI: 10.1097/AOG.0000000000002456
7. Nana M, Tydeman F, Bevan G, Boulding H, Kavanagh K, Dean C, et al. Hyperemesis gravidarum is associated with increased rates of termination of pregnancy and suicidal ideation: results from a survey completed by >5000 participants. Am J Obstet Gynecol. 2021 Jun;224(6):629-31. DOI: 10.1016/j.ajog.2021.03.006
8. Dean CR, Bierma H, Clarke R, Cleary B, Ellis P, Gadsby R, et al. A patient-clinician James Lind Alliance partnership to identify research priorities for hyperemesis gravidarum. BMJ open. 2021 Jan. DOI: 10.1136/bmjopen-2020-041254

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https://www.rcpi.ie/faculties/obstetricians-and-gynaecologists/national-clinical-guidelines-in-obstetrics-and-gynaecology/