The Shrewsbury and Telford Hospital NHS Trust

Nausea and Vomiting in Pregnancy and Hyperemesis Gravidarum

Version 4

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For Triennial Review

Version	Implementation Date	History	Ratified By	Full Review Date
1	14th March 2013	New Guideline	Maternity Guidelines Group (MGG) Maternity Governance	March 2016
2	5th July 2016	Full version review	MGG Maternity Governance	June 2019
3	7th May 2020	Full Version Review	Gynae Clinical Governance	7th May 2020
4	7th October 2024	Full Version Review	Gynae Clinical Governance	October 2027

In this guideline we use the terms 'woman' or 'mother' throughout. These should be taken to include people who do not identify as women but are pregnant or have given birth.

1.0 Introduction

1.1 NVP affects up to 90% of pregnant women and is one of the most common indications for hospital admission among pregnant women, with typical stays of between three and four days.

1.2 NVP is defined as the symptom of nausea and/or vomiting during pregnancy when onset is prior to 16 weeks of gestation and where there are no other causes.

1.3 NVP typically starts between the fourth and seventh weeks of gestation, peaks in approximately the ninth week and resolves by the 20th week in 90% of women

1.4 Hyperemesis Gravidarum (HG) affects just 0.3 – 3.6% of pregnancies (RCOG 2024). The term Hyperemesis Gravidarum has a very specific definition (see 4.5), and should not be used as shorthand for any pregnant woman with nausea/vomiting.

1.5 The major mechanism of NVP and HG has recently been elucidated to be related to hypersensitivity to the vomiting hormone growth differentiation factor-15 (GDF15). GDF15 caused loss of appetite, taste aver-sion, nausea, vomiting and weight loss. Variation in the GDF15 gene both in families and in unrelated individuals is associated with HG. Both hCG and GDF15 are made when genes in the placenta are activated and circulating levels have a peak in the first half of pregnancy, but no genetic variants in hCG have been identified (even in very large studies) to be associated with HG. Higher circulating levels of GDF15 and not hCG were found in hospitalised HG patients, patients taking medication for NVP, and patients with 2nd trimester vomiting.11 hCG is therefore unlikely to be causative.11 Genetic variants associated with expression of GDF15 in families with HG have been identified as the greatest genetic risk factor for HG12 and are associated with recurrence in subsequent pregnancies

1.6 NVP and HG are associated with hyponatraemia, hypokalaemia, low serum urea, raised haematocrit and ke-tonuria with a metabolic hypochloraemic alkalosis. If severe, a metabolic acidosis may develop. In two-thirds of women with HG, there may be abnormal thyroid function tests (based on a structural similarity between thyroid-stimulating hormone [TSH] and hCG with a biochemical thyrotoxicosis, and raised free thyroxine levels with or without a suppressed thyroid stimulating hormone level. These patients rarely have thyroid antibodies and are euthyroid clinically. The biochemical thyrotoxicosis resolves as the HG improves and treatment with antithyroid drugs is unnecessary. A raised T4 and low TSH therefore do not need treatment in straightforward NVP/HG where the cause is clear and the patient is responding to treatment. Liver function tests are abnormal in up to 40% of women with HG,25 with the most likely abnormality being a rise in transaminases. Levels of both bilirubin and amylase may be mildly elevated. These abnormalities improve as the HG re-solves.

1.7 HG can impact on the psychological quality of a woman's experience of her pregnancy.

1.8 Complications of NVP and HG include:

Maternal: Weight loss, Dehydration, Electrolyte imbalance, Vitamin B12 and Vitamin B6 deficiencies, Wernicke's encephalopathy (due to Vitamin B1 (Thiamine) deficiency), Mallory-Weiss tears of oesophagus, Hepatic dysfunction (due to malnutrition and catabolic changes), inability to swallow saliva

Postpartum: persistence of food aversion, gall bladder dysfunction, Post traumatic stress disorder

Fetal: Intra-uterine Growth Restriction

2.0 Aim

2.1 To aid diagnosis of hyperemesis gravidarum and nausea and vomiting in pregnancy. An objective and validated index of nausea and vomiting such as the Pregnancy- Unique Quantification of Emesis (PUQE) and Hyperemesis Level Prediction (HELP) tools can be used to classify the severity of NVP and HG. The PUQE score is a validated score to objectively assess severity of NVP and treatment response for mild to moderate NVP. The HELP score is another validated score to determine treatment response in severe NVP and HG in addition to assessing severity. (See appendix C) Ketonuria is not an indicator of dehydration in pregnancy and should not be used to assess severity.

2.2 To provide a framework for consistent management

3.0 Objectives

3.1 To ensure appropriate management is given to women

3.2 To ensure suitability of women for ambulatory day care or inpatient management

4.0 Definitions

4.1 Nausea and Vomiting of Pregnancy (NVP) should be diagnosed if:
Onset in 1st trimester
Exclusion of other causes of nausea and vomiting

4.2 **Mild** PUQE Score 6

4.3 **Moderate** PUQE Score 7–12; Severe = 13–15.

4.4 **Severe** PUQE Score 13–15

4.5 **Hyperemesis Gravidarum** (HG) should be diagnosed if: HG can be diagnosed when symptoms start in early pregnancy, nausea and/or vomiting are severe enough to cause an inability to eat and drink normally and strongly limits daily activities of living. Signs of dehydration are contributory to diagnosis. This definition represents a shift from a historic reliance on objective measures such as weight loss and electrolyte imbalance, and towards subjective patient focused criteria which may lead to improved recognition and diagnosis of HG. Ketonuria is not an indicator of dehydration in pregnancy and should not be used to assess severity.

5.0 Process

5.1 Referral

5.1.1 General Practitioner (GP) Referral

GPs are to refer, via Care Coordination, to the On-call Gynae Consultant Mon/Friday 0800-1700 or to Tier 2 Registrar at other times. The GP should confirm +ve pregnancy test, attempts to manage in Primary Care, success/failure of oral anti-emetics and routine dietary/lifestyle changes already discussed. Triage to care pathway

5.1.2 Emergency Department (ED) Referral

As per GP referral. If ward inpatient admission or Gynae Ambulatory Treatment Unit (GATU) attendance are required then ED should perform routine blood tests (see 5.2.3), obtain IV access and start IV fluids (see 5.4.1).Triage to care pathway

5.2 Initial Assessment

5.2.1 History

Previous history of NVP/HG
Quantify severity using PUQE/HELP score nausea, vomiting, ptyalism (hypersalivation), spitting, weight loss, inability to tolerate food and fluids, effect on quality of life and ability to perform daily activities.
Ask about self-reported nutritional status or rapid weight loss.
Ask about co-morbidities which may be complicated by lack of oral intake of essential medications such as epilepsy, diabetes, HIV, psychiatric conditions and hypoadrenalism.
Relevant surgical history such as gastric bypass, band or sleeve
History to exclude other causes.
-abdominal pain
-urinary symptoms
-Infection
-drug history (prescription and/or recreational)
-chronic Helicobacter pylori

5.2.2 Examination

Temperature
• Heart rate (tachycardia in dehydration)
• Blood pressure (hypotension in dehydration)
• Oxygen saturations
• Respiratory rate (tachypnoea in dehydration)
• Abdominal examination
• Weight
• Signs of dehydration such as sunken eyes, dry lips and mouth, oliguria or anuria, tachycardia and hypotension
• Signs of malnutrition or rapid weight loss (≥5% pre pregnancy weight), and muscle wasting as measured by mid-arm circumference
• Neurological signs such as confusion, nystagmus or ataxia which could indicate Wernicke's encephalopathy

5.2.3 Routine Investigations

Observations – Pulse, Blood Pressure, Temperature
Urine dip – Nitrates may indicate infection. Ketones are not indicator of dehydration

5.2.4 Further investigations if GATU Day Case

All of the above, plus:
Urea & Electrolytes – sodium, potassium, creatinine (to inform fluid management and to exclude renal impairment)
Bone Profile – calcium (to exclude hypercalcaemia)

Full Blood Count – haemoglobin, white cells, haematocrit (to exclude infection and to recognise haemoconcentration)
Serum blood glucose (to exclude Diabetic Keto-Acidosis)
Ultrasound scan for viability and to exclude multiple pregnancy or trophoblastic disease (only on first attendance and not if previously done, need not be performed the same day but within 48hrs)
MRSA swabs

5.2.5 Further investigations if Inpatient Admission

All of the above, plus:

- Weight daily
- Prescribe Venous Thrombo-Embolism (VTE) prophylaxis (Tinzaparin is prescribed once daily, based on booking weight, for each day on which the patient is admitted).
- If re-admission consider Liver Function Tests (to exclude hepatitis/gallstones/ malnutrition), Amylase (to exclude pancreatitis) and Thyroid Function Tests.

5.3 Where to Treat

5.3.1 Triaging

The best place (and time) to treat is assessed based on the initial assessment (5.2.1-5.2.3)

5.2.2 Community Care

Continued GP/Primary Care/Outpatient management if:
Mild NVP
Moderate NVP, where oral fluids/medications are tolerated, no complications suggestive of HG, no comorbidity and symptoms are adequately controlled with oral antiemetics

5.3.2 GATU Care

GATU Day Case management if:

- Moderate NVP, where oral fluids/medications are not tolerated, complications suggestive of HG, comorbidity, or symptoms are not adequately controlled with oral antiemetics
- Severe NVP, without complications or comorbidities and where symptoms are controlled with current parenteral antiemetics

If referral is made before midday, patients will be seen on the same day.
If a GP referral is made after midday, the GP should be asked to give an IM antiemetic before discharging the patient. (Should a patient inadvertently arrive at GATU after midday, they should receive a dose of IM antiemetic before discharging home for the night)

5.3.3 Ward Care

Inpatient care should be considered if there is at least one of the following:
• Continued nausea and vomiting and inability to keep down oral antiemetics• Continued nausea and vomiting associated with clinical dehydration or weight loss (greater than 5% of body weight), despite oral antiemetics
• Confirmed or suspected comorbidity (such as urinary tract infection and inability to tolerate oral antibiotics)
.• Comorbidities such as epilepsy, diabetes, HIV, hypoadrenalism or psychiatric disease where symptoms and inability to tolerate oral intake and medication could present further complications.

5.4 Intravenous fluids

5.4.1 Initial rehydration

Normal saline (0.9% NaCl) with additional potassium chloride in each bag, with administration guided by daily monitoring of electrolytes, is the most appropriate intravenous hydration. (1l at 1000ml/hr, 1l at 500ml/hr, 1l at 250ml/hr)

The use of dextrose infusions for fluid replacement in NVP and HG is not recommended. Correction of Potassium <3.5mmol/l
1l 0.9% Sodium Chloride with 20mmol Potassium Chloride at 125ml/hour
Repeat serum electrolytes every 24 hours. (UKMi 2017)

5.4.2 Correction of Potassium <2.5mmol/l
1l 0.9% Sodium Chloride with 40mmol Potassium Chloride at 167ml/hour
Repeat serum electrolytes after each litre. (UKMi 2017)

5.4.3 Be aware that:
Overzealous correction of hyponatremia may lead to central pontine myelinolysis

5.5 Antiemetics

5.5.1 General
(For prescribing see Appendix A. For contra-indications, cautions, and side-effects see Appendix B)

Combinations of drugs should be used in women who do not respond to a single antiemetic (see summary and receptor affinities Appendix A). However, it should be explained that the risk of oculogyric crisis increases with polypharmacy.

Antiemetics should be prescribed and taken regularly while vomiting (not 'as required' or 'PRN')

It should be explained that, while safety data exists, none of the currently prescribed drugs are without risk in pregnant women. This advice, along with any specific side-effects of the drugs prescribed (see Appendix B), should be clearly documented in the notes.

5.5.2 First Line Therapy
Cyclizine 50 mg PO, IM or IV 8 hourly
Prochlorperazine 5–10 mg 6–8 hourly PO (or 3 mg buccal); 12.5 mg 8 hourly IM/IV; 25 mg PR daily
Promethazine 12.5–25 mg 4–8 hourly PO, IM or IV
Chlorpromazine 10–25 mg 4–6 hourly PO, IM or IV
Promethazine is a suitable substitute for Cyclizine but has greater sedation (check for cautions and side effects in Appendix).

5.5.3 Second Line Therapy
Doxylamine and Pyridoxine (vitamin B6) 20/20mg PO at night, increase to additional 10/10 mg in morning and 10/10mg at lunchtime if required.

Metoclopramide 5–10 mg 8 hourly PO, IV/IM/SC

Domperidone 10 mg 8 hourly PO; 30 mg 12 hourly PR
Ondansetron 4 mg 8 hourly or 8 mg 12 hourly PO; 8 mg over 15 minutes 12 hourly IV; 16 mg daily PR(Women taking ondansetron may require laxatives if constipation develops) There is evidence that ondansetron is safe and effective. Its use as a second line antiemetic should not be discouraged if first line antiemetics are ineffective. Women can be reassured regarding a very small increase in the absolute risk of orofacial clefting with ondansetron use in the first trimester, which should be balanced with the risks of poorly managed HG.

5.5.4 Refractory Therapy

Steroid therapy can be considered with Consultant agreement. There is an increased risk of cleft lip/palate if used in 1st trimester. Hydrocortisone 100 mg twice daily IV and once clinical improvement occurs, convert to prednisolone 40–50 mg daily PO, with the dose gradually tapered (by 5-10 mg per week) until the lowest maintenance dose that controls the symptoms is reached(Corticosteroids should be reserved for cases where standard therapies have failed; when initiated they should be prescribed in addition to previously started effective antiemetics. Women taking corticosteroids should have their blood pressure monitored and a screen for diabetes mellitus)

Steroid treatment is contraindicated in patients with possible gastroduodenal ulceration. Patients must be warned about the risk of osteoporosis, infection and (rarely) aseptic necrosis of the hip. Fetal adrenal suppression may occur if prolonged high dose exposure. Discuss possible increased risk of oral cleft if starting corticosteroids before 10 weeks of gestation.

Patients who need to stay on steroids throughout the pregnancy or need >40mg Prednisolone must carry a Steroid Treatment Card with them all the times, be booked to Consultant-led care, undergo an Oral Glucose Tolerance Test (OGTT) and have monitoring of fetal growth. (NICE 2017).

Patients still on steroids at the time of delivery must be given Hydrocortisone 100mg IV 6 hourly during labour/delivery.

Patients requiring steroids for more than 3 weeks or requiring more than 40mg for one week will need a tapering withdrawal regimen (NICE 2017).

5.5.5 Complementary Therapy

Ginger has evidence for effectiveness (possible gastric irritant, interaction with beta blockers and benzodiazepines, absolute maximum dose 5g per day).

Accupuncture/Accustimulation is safe and has efficacy at PC6 (2.5cm proximal to medial wrist between palmaris longus and flexor carpi radialis) (Hypnosis, homeopathy and herbal remedies have not be evidenced)

5.6 Other Medications

5.6.1 Vitamins

Thiamine supplementation (either oral 100 mg tds or intravenous as part of vitamin B complex (Pabrinex®)) should be given to all women admitted with vomiting, or severely reduced dietary intake, especially before administration of dextrose or parenteral nutrition
(Pyridoxine is not evidenced as an antiemetic)

5.6.2 Antacid/Antidyspeptics

Histamine type-2 receptor blockers or proton pump inhibitors may be used for women developing gastro- oesophageal ref lux disease, oesophagitis or gastritis**.** **Omeprazole** should be considered in women developing reflux, oesophagitis or gastritis.

5.6.3 VTE Prophylaxis

Tinzaparin should be prescribed in all women admitted to the ward with dehydration (see VTE Prophylaxis Guideline). It should also be considered for those being managed on an outpatient basis in individual cases based on overall risk of VTE according to RCOG criteria.

5.6.3 Iron Women with previous or current NVP or HG should consider avoiding iron-containing preparations if these exacerbate symptoms or consider alternative route of administering iron

5.6.4 Laxative Women should be questioned about their bowel habits and offered laxatives if constipated, and particularly if ondansetron is used.

5.7 Diet

5.7.1 Diet Modification

Small frequent meals, with bland, dry food and avoiding fatty food along with adequate hydration may be enough to control symptoms.

5.7.2 Enteral/Parenteral Feeding

When all other medical therapies have failed, enteral or parenteral treatment should be considered with multidisciplinary approach.

5.8 Advice, Support and Discharge

5.8.1 Psychosocial support

A woman's quality of life can be adversely affected by NVP/HG, and this should be addressed. Assess mental health at each encounter and refer for help if necessary.

Clinicians should validate the woman's physiological symptoms and psychological distress.

5.8.2 Follow-up

Women should have an individualised care plan on discharge from hospital, including access to further care and treatment. Inform the woman that early measures/interventions may reduce symptom severity.

Women should be informed that there is a risk of recurrence in future pregnancies

5.8.3 GATU Day Case Discharge Documentation

A Paper Ward Attender Form (Blue) and COF form should be completed. A letter should be dictated (to ensure that the episode is recorded on Portal). The 'Information for GP' form should be completed.

A TTO may be required for newly started antiemetics, or if the patient has run out (maximum 7 days, or enough until next planned GATU attendance)

5.8.4 Inpatient Discharge Documentation

Discharge summaries should be completed prior to discharge.

A TTO may be required for newly started antiemetics, or if the patient has run out (maximum 7 days)

6.0 Training

Refer to Training Needs Analysis Guideline.

7.0 Monitoring & Audit

The decision to audit/monitor standards within the guideline will be taken by the Maternity Clinical Governance Group. Audit/Monitoring will follow the process set out women & Children's Care Group Monitoring and Audit Procedure for Assurance (105) and where appropriate in conjunction with the SaTH Clinical Audit Policy CG25.

8.0 References

RCOG (2024) *Guideline 69 – The management of Nausea and Vomiting of Pregnancy and Hyperemesis Gravidarum,* Royal College of Obstetricians and Gynaecologists,

UKMi (2012) *How should nausea and vomiting be treated during pregnancy,* UK Medicines Information, National Electronic Library for Medicine (www.nelm.nhs.uk) published 2012

Koren G et al (2002), *PUQE (pregnancy-unique quantification of emesis and nausea) scoring system for nausea and vomiting of pregnancy*. Am J Obstet Gynecol 2002;1862

UKMi (2017) *How is hypokalaemia treated in adults,* UK Medicines Information, National Electronic Library for Medicine (www.nelm.nhs.uk) published 2017

NICE (2017) *Corticosteroids – Oral*, National Institute of Health and Care Excellence, https://cks.nice.org.uk/corticosteroids-oral#!scenario

Appendix A – Cautions to be discussed and documented in notes

Cyclizine
No evidence of teratogenicity.
Side effects include: Agitation (rare).
(Caution in epilepsy; with other CNS depressant drugs)

Prochlorperazine
Side effects include: Agitation, dizziness, hypotension, QT prolongation (common);
VTE (uncommon); hyperglycaemia, neonal withdrawal (rare)
(Caution in epilepsy, depression; with other CNS depressant drugs)

Promethazine
No evidence of teratogenicity.
Side effects include: Drowsiness, arrhythmia, confusion, blurred vision
(Caution in epilepsy; avoid extravasation; with other CNS depressant drugs)

Metoclopramide
MHRA – Maximum 5 days, IV as slow bolus
Side effects include: Dystonia (common, especially in young)
Depression, diarrhoea, drowsiness (common); arrhythmias, hallucination (uncommon)
(Contra-indicated within 4 days of GI surgery; Caution in asthma, bradycardia, epilepsy, <20 years of age)

Domperidone
MRHA – Maximum 1 week, not if wt <35kg or hepatic impairment; Seek help if palpitations
Side effects include: Anxiety, diarrhoea (uncommon); arrhythmia, depression, QT prolongation (rare)
(Contra-indicated in cardiac disease)

Ondansetron (not licenced) – Consultant decision only
MRHA – Increased risk of Oral Cleft in 1st trimester (0.14% vs 0.11%), IV as slow bolus over 15 min
Side-effects include: constipation, headache (common); arrhythmias, chest pain, hypotension, seizure (uncommon);
QT prolongation (rare)
(Contra-indicated in long QT; Caution in electrolyte imbalance)

Appendix B

APPENDIX Pregnancy-Unique Quantification of Emesis (PUQE) index

Total score is sum of replies to each of the three questions. PUQE-24 Score: Mild 6; Moderate = 7–12; Severe = 13–15.

Motherisk PUQE-24 scoring system					
In the last 24 hours, for how long have you felt nauseated or sick to your stomach?	Not at all (1)	1 hour or less (2)	2–3 hours (3)	4–6 hours (4)	More than 6 hours (5)
In the last 24 hours have you vomited or thrown up?	I did not throw up (1)	1–2 times (2)	3–4 times (3)	5–6 times (4)	7 or more times (5)
In the last 24 hours how many times have you had retching or dry heaves without bringing anything up?	No time (1)	1–2 times (2)	3–4 times (3)	5–6 times (4)	7 or more times (5)

PUQE-24 Score: Mild 6; Moderate = 7–12; Severe = 13–15.

How many hours have you slept out of 24 hours? Why? _____

On a scale of 0 to 10, how would you rate your wellbeing?_____
0 (worst possible) 10 (The best you felt before pregnancy)

Can you tell me what causes you to feel that way?_____

APPENDIX HELP (HyperEmesis Level Prediction Score)

My nausea level most of the time:	0	1 (Mild)	2	3 (Moderate)	4	5 (Severe)
I average __ vomiting episodes/day:	0	1-2	3-5	6-8	9-12	13 or more
I retch/dry heave __ episodes daily:	0	1-2	3-5	6-8	9-12	13 or more
I am urinating/voiding:	Same	More often due to IV fluids; or light color	Slightly less often, and normal color	Once every 8 hours; or slightly dark yellow	Less than every 8 hours or darker	Rarely; dark or bloody; or foul smell
Nausea/vomiting severity 1 hour *after* meds OR after food/drink if no meds:	0 or No Meds	1 (Mild)	2	3 (Moderate)	4	5 (Severe)
Average number of hours I'm unable to work adequately at my job and/or at home due to being sick has been:	0	1-2 (hours are slightly less)	3-4 (can work part time)	5-7 (can only do a little work)	8-10 (can't care for family)	11+ (can't care for myself)
I have been coping with the nausea, vomiting and retching:	Nor-mal	Tired but mood is ok	Slightly less than normal	It's tolerable but difficult	Struggling: moody, emotional	Poorly: irritable depressed
Total amount I have been able to eat/drink AND keep it down: *Medium water bottle/large cup = 2 cups/500mL.*	Same; no weight loss	Total of about 3 meals & 6+ cups fluid	Total of about 2 meals & some fluid	1 meal & few cups fluid; or only fluid or only food	Very little, <1 meal/minimal fluids; or frequent IV	Nothing goes or stays down, or daily IV/TPN/NG
My anti-nausea/vomiting meds stay down or are tolerated:	No meds	Always	Nearly always	Sometimes	Rarely	Never/IV/SQ (SubQ pump)
My symptoms compared to last week:	Great	Better	About Same	Worse	Much Worse	So Much Worse!!!
Weight loss over last 7 days: ___%	0%	1%	2%	3%	4%	5%
Number of Rx's for nausea/vomiting*	0	1	2	3	4	5+
	0 pts	1 pt/answer	2 pts/answer	3 pts/answer	4 pts/answer	5 pts/answer
TOTAL each column = (#answers in column) x (# points for each answer)	0	____	____	____	____	____
TOTAL for ALL columns: _____	None/Mild ≤ 19			Moderate 20-32		Severe 33-60

Appendix C

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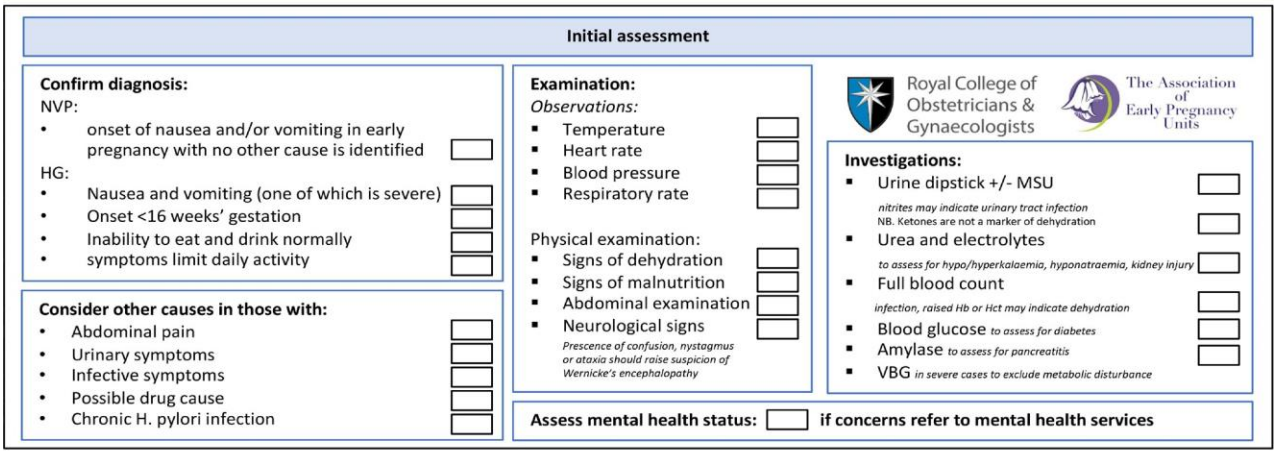
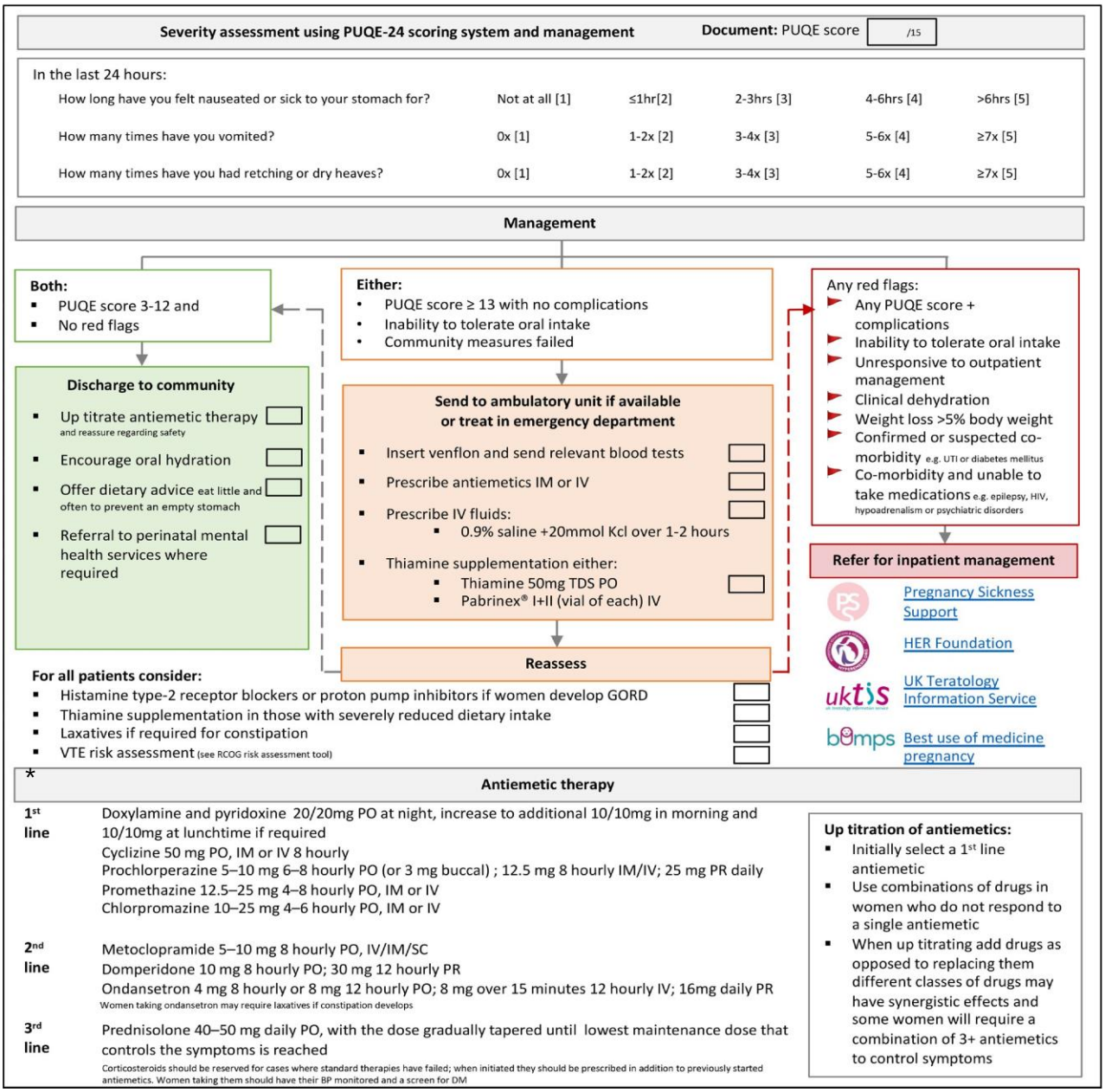
Vb. Management of Nausea and Vomiting of Pregnancy (NVP)/ Hyperemesis Gravidarum (HG) in the ambulatory care





Appendix D

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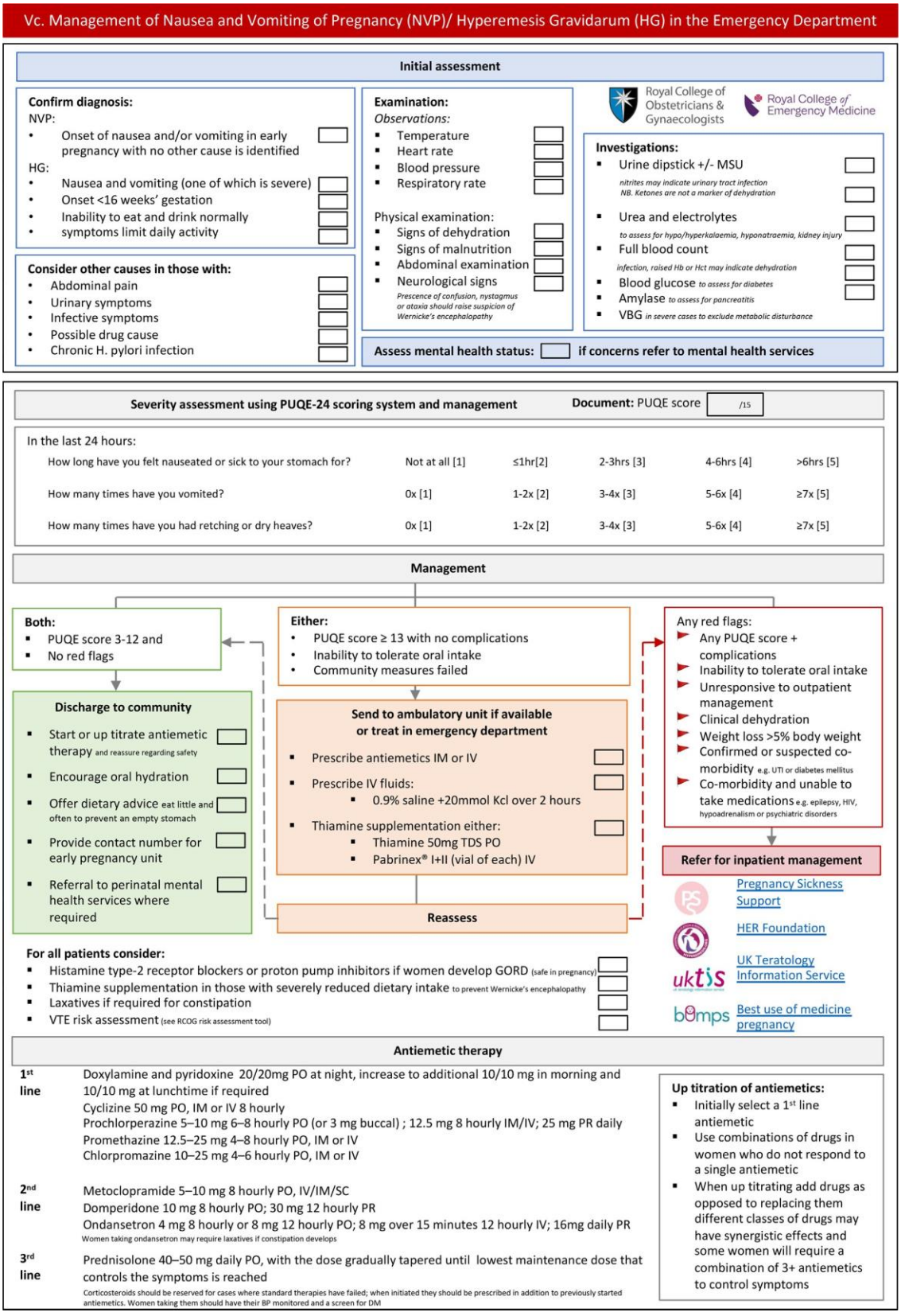
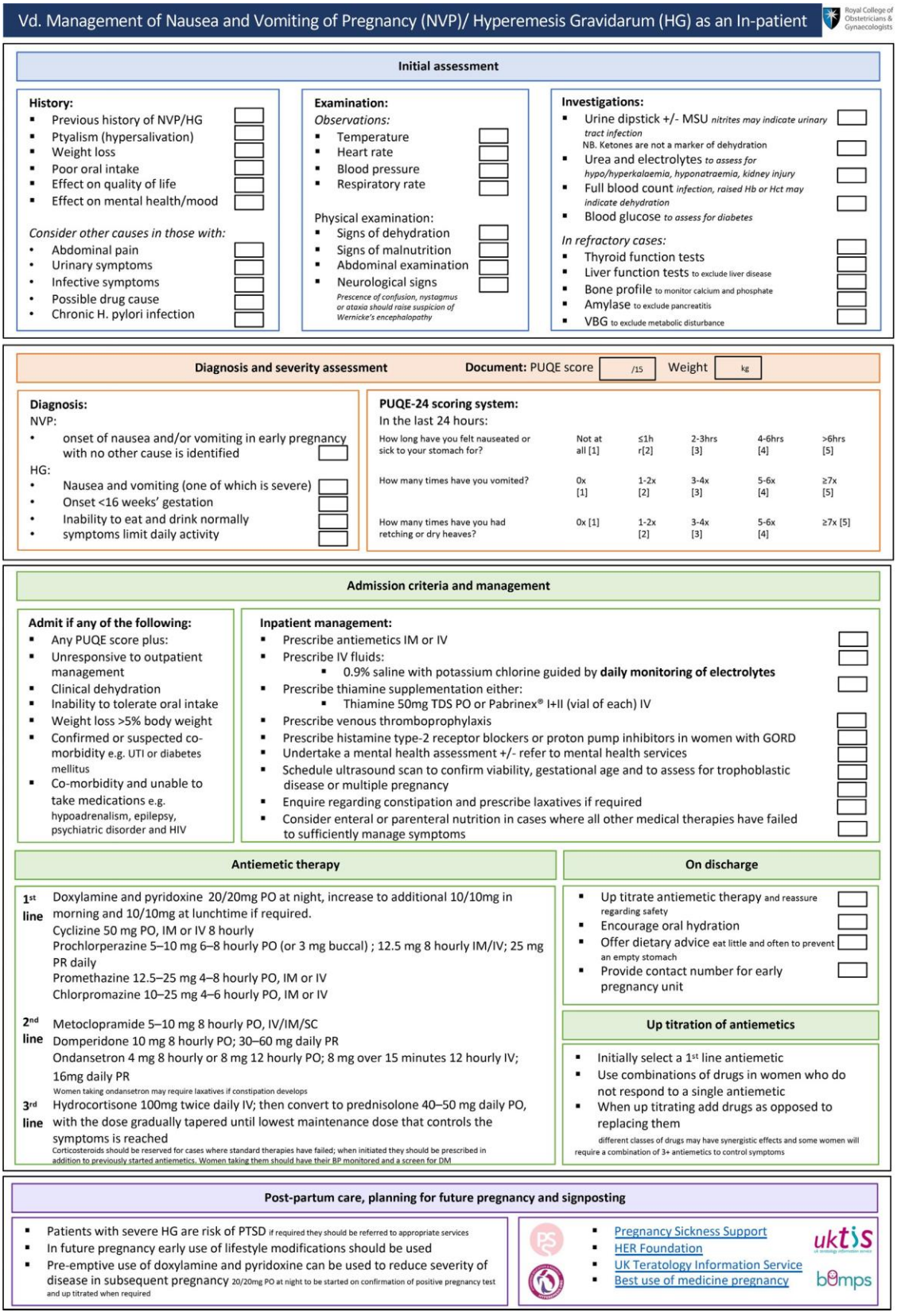


Appendix E


Vd. Management of Nausea and Vomiting of Pregnancy (NVP)/ Hyperemesis Gravidarum (HG) as an In-patient
Royal College of Obstetricians & Gynaecologists
Initial assessment
History:
Previous history of NVP/HG
Ptyalism (hypersalivation)
Weight loss
Poor oral intake
Effect on quality of life
Effect on mental health/mood
Consider other causes in those with:
Abdominal pain
Urinary symptoms
Infective symptoms
Possible drug cause
Chronic H. pylori infection
Examination:
Observations:
Temperature
Heart rate
Blood pressure
Respiratory rate
Physical examination:
Signs of dehydration
Signs of malnutrition
Abdominal examination
Neurological signs
Prescence of confusion, nystagmus or ataxia should raise suspicion of Wernicke's encephalopathy
Investigations:
Urine dipstick +/- MSU nitrites may indicate urinary tract infection
NB. Ketones are not a marker of dehydration
Urea and electrolytes to assess for hypo/hyperkalaemia, hyponatraemia, kidney injury
Full blood count infection, raised Hb or Hct may indicate dehydration
Blood glucose to assess for diabetes
In refractory cases:
Thyroid function tests
Liver function tests to exclude liver disease
Bone profile to monitor calcium and phosphate
Amylase to exclude pancreatitis
VBG to exclude metabolic disturbance
Diagnosis and severity assessment
Document: PUQE score /15 Weight kg
Diagnosis:
NVP:
onset of nausea and/or vomiting in early pregnancy with no other cause is identified
HG:
Nausea and vomiting (one of which is severe)
Onset <16 weeks' gestation
Inability to eat and drink normally
symptoms limit daily activity
PUQE-24 scoring system:
In the last 24 hours:
How long have you felt nauseated or sick to your stomach for? Not at all [1] ≤1h r[2] 2-3hrs [3] 4-6hrs [4] >6hrs [5]
How many times have you vomited? 0x [1] 1-2x [2] 3-4x [3] 5-6x [4] ≥7x [5]
How many times have you had retching or dry heaves? 0x [1] 1-2x [2] 3-4x [3] 5-6x [4] ≥7x [5]
Admission criteria and management
Admit if any of the following:
Any PUQE score plus:
Unresponsive to outpatient management
Clinical dehydration
Inability to tolerate oral intake
Weight loss >5% body weight
Confirmed or suspected co-morbidity e.g. UTI or diabetes mellitus
Co-morbidity and unable to take medications e.g. hypoadrenalism, epilepsy, psychiatric disorder and HIV
Inpatient management:
Prescribe antiemetics IM or IV
Prescribe IV fluids:
0.9% saline with potassium chlorine guided by daily monitoring of electrolytes
Prescribe thiamine supplementation either:
Thiamine 50mg TDS PO or Pabrinex® I+II (vial of each) IV
Prescribe venous thromboprophylaxis
Prescribe histamine type-2 receptor blockers or proton pump inhibitors in women with GORD
Undertake a mental health assessment +/- refer to mental health services
Schedule ultrasound scan to confirm viability, gestational age and to assess for trophoblastic disease or multiple pregnancy
Enquire regarding constipation and prescribe laxatives if required
Consider enteral or parenteral nutrition in cases where all other medical therapies have failed to sufficiently manage symptoms
Antiemetic therapy
1st line Doxylamine and pyridoxine 20/20mg PO at night, increase to additional 10/10mg in morning and 10/10mg at lunchtime if required.
Cyclizine 50 mg PO, IM or IV 8 hourly
Prochlorperazine 5–10 mg 6–8 hourly PO (or 3 mg buccal) ; 12.5 mg 8 hourly IM/IV; 25 mg PR daily
Promethazine 12.5–25 mg 4–8 hourly PO, IM or IV
Chlorpromazine 10–25 mg 4–6 hourly PO, IM or IV
2nd line Metoclopramide 5–10 mg 8 hourly PO, IV/IM/SC
Domperidone 10 mg 8 hourly PO; 30–60 mg daily PR
Ondansetron 4 mg 8 hourly or 8 mg 12 hourly PO; 8 mg over 15 minutes 12 hourly IV; 16mg daily PR
Women taking ondansetron may require laxatives if constipation develops
3rd line Hydrocortisone 100mg twice daily IV; then convert to prednisolone 40–50 mg daily PO, with the dose gradually tapered until lowest maintenance dose that controls the symptoms is reached
Corticosteroids should be reserved for cases where standard therapies have failed; when initiated they should be prescribed in addition to previously started antiemetics. Women taking them should have their BP monitored and a screen for DM
On discharge
Up titrate antiemetic therapy and reassure regarding safety
Encourage oral hydration
Offer dietary advice eat little and often to prevent an empty stomach
Provide contact number for early pregnancy unit
Up titration of antiemetics
Initially select a 1st line antiemetic
Use combinations of drugs in women who do not respond to a single antiemetic
When up titrating add drugs as opposed to replacing them
different classes of drugs may have synergistic effects and some women will require a combination of 3+ antiemetics to control symptoms
Post-partum care, planning for future pregnancy and signposting
Patients with severe HG are risk of PTSD if required they should be referred to appropriate services
In future pregnancy early use of lifestyle modifications should be used
Pre-emptive use of doxylamine and pyridoxine can be used to reduce severity of disease in subsequent pregnancy 20/20mg PO at night to be started on confirmation of positive pregnancy test and up titrated when required
Pregnancy Sickness Support
HER Foundation
UK Teratology Information Service
Best use of medicine pregnancy
ukTIS
bumps