HYPEREMESIS GRAVIDARUM (HG) / SEVERE NAUSEA AND VOMITING IN PREGNANCY (NVP) - CLINICAL GUIDELINE

1. Aim/Purpose of this Guideline
   1.1. To inform midwives and obstetricians of care pathways and management for women suffering from:
       - Hyperemesis Gravidarum (HG)
       - Moderate - severe nausea and vomiting in pregnancy (NVP)
   Nausea and vomiting is experienced by 79-80% of women on a spectrum from very mild to very severe with associated complications. 35% of women women experience symptoms of clinical significance for which they seek medical aid. HG is an extreme form of nausea and vomiting which affects 1.5% of women. It is associated with weight loss greater than 5% of pre-pregnancy weight, large ketonuria and dehydration. Up to 60% of women continue to have symptoms until the end of their pregnancy.

2. The Guidance
   2.2. Complications
       - Acidosis
       - DVT
       - Hypoatraemia
       - Wernicke’s Encephalopathy
       - Depression and social isolation
       - Pressure damage to skin tissue
       - Retinal haemorrhage
       - Oesophageal rupture or Mallory-Weiss tears
       - Small for Gestational Age (SGA) in women with low pregnancy weight gain

   2.3. Referral Criteria
       2.3.1. Day-Case Admission
           - Unable to maintain adequate hydration orally at home
           - Vomiting > 24hours
           - Moderate ketosis on urinalysis

       2.3.2. Inpatient Admission
           - Haematemesis
           - Loss of 10% body weight
           - Significantly abnormal U+E’s (Na<120mmol/l)
           - Severe abdominal pain or symptoms suggestive of another cause for vomiting
           - Persistent vomiting after day case rehydration
           - Persistent Ketosis on urinalysis after day case rehydration
           - 3 previous attendances for day cases
2.4. Initial Assessment and Investigation

- Assess for clinical dehydration – dry mucus membranes, tachycardia, weight loss, concentrated urine
- Gain history of:
  - Onset, duration and frequency of nausea and vomiting
  - Whether food and drink are being tolerated
  - Associated symptoms
  - Co-existing conditions
  - The effect on the woman’s life e.g. work, home situation and ability to care for her family
- Weigh patient on admission
- MEOWS score
- Urine analysis. MSU – to exclude UTI. NB: if glycosuria as well as ketones consider diabetes
- Full blood count (FBC) – haematocrit is usually raised
- U +E’s- usually reveals hyponatremia, ohypokalaemia and high serum urea
- Check magnesium if hyperemesis severe, or if potassium, 3.0 mmol/l
- LFTS’s – abnormal in 25-40% - usual mild elevations in serum transminases and total bilirubin
- Thyroid function tests not required (abnormal in two-thirds of patients)
- Ultrasound scan to confirm gestation and exclude multiple or molar pregnancy

2.5. Differential Diagnosis

2.5.1. Findings which may suggest an alternative diagnosis include:
- Abdominal pain (more that mild epigastric tenderness after retching)
- Fever
- Headache or abnormal neurological examination
- Goitre

2.5.2. Conditions causing nausea and vomiting in pregnancy:
- Genito-urinary conditions – UTI, uraemia, pyelonephritis, ovarian torsion
- Metabolic disorders and endocrine conditions – hypercalcaemia, thyrotoxicosis, diabetic ketoacidosis, Addison’s disease
- Gastrointestinal conditions – gastritis, peptic ulcer, pancreatitis, bowel obstruction, hepatitis, appendicitis
- ENT conditions e.g. labyrinthitis
- Neurological disorders – vestibular disease, migraine
- Other pregnancy-related conditions – acute fatty liver of pregnancy, pre-eclampsia (consider pre-eclampsia if the onset is of NVP is in second half of pregnancy).
- Drug induced vomiting – e.g. iron or opioids
- Psychological disorders – e.g. eating disorders

2.6. Management

2.6.1. Fluid and Electrolyte Replacement
- Avoid dextrose containing fluids – carbohydrate rich fluids may precipitate Wernicke’s Encephalopathy
- 2000ml Hartman’s solution given over 4 hours
Additional fluid and electrolyte requirements should be adapted based on urinalysis and U+E’s
- Potassium is almost always required with subsequent IV fluids

2.6.2. Anti-emetic Therapy
No anti-emetics are currently licensed for use in pregnancy in the UK, however many have been in use for decades without any known effect on the fetus
- Withhold non-essential medications associated with NVP e.g. oral iron
- Give first dose IM/ IV on admission
- Continued regular prescription of anti-emetics is essential. IV /IM until patient is eating without vomiting
- A combination of medications may be required
- Prescribe at times which give maximum effect at meal times

2.6.3. First line Anti-emetic therapy
2 of these drugs used together may be more effective than a single drug.
- Phenothiazines – Prochlorperazine (Stemetil) 12.5mg IM
- Antihistamines - Cyclizine 50mg by IM or IV injection x 3 daily
- Metoclopramide – 10mg 3 times daily (Reduce dose to 5mg in patients <60kg) Metoclopramide should not be used for women <20 years as associated with dystonias.

2.6.4. Second line Anti-emetic
In addition to a first line drug - Ondansetron – 4mg IV 12 hourly.

2.6.5. Third line Anti-emetic
Following Consultant review consider Hydrocortisone 100mg bd initially followed by Prednisolone 20mg bd for 7 days reducing the dose thereafter. Steroids are reserved for cases where the above treatments including repeated inpatient admissions have failed and should be commenced as an inpatient.

2.6.6. Nutrition
- Encourage oral fluids when they can be tolerated
- Record fluid balance
- Encourage frequent snacks of “safe foods” when able to eat
- Use MUST (Nutrition Assessment) tool in severe cases
- Assistance to eat when required
- Consider referral to Dietician in severe cases

2.6.7. Thiamine
Thiamine 50mg x 3 daily should be routinely given to all women admitted to hospital with severe prolonged vomiting until eating normally. Oral Thiamine may need to be continued after discharge.
If unable to tolerate oral Thiamine consider Pabinrex IV diluted in 100ml Sodium Chloride.
2.6.8. Thromboprophylaxis
A VTE assessment must be completed on admission and anti-embolic stockings / Fragmin given to all clinically dehydrated patients on bedrest.

2.7. Midwifery Care
- Urinalysis on every specimen
- Accurate fluid balance for inpatients
- MEOWS 4 hourly
- Weigh woman on each admission or weekly if she remains an inpatient
- Women report that sensory stimulation is a trigger for vomiting therefore nurse in a side room if possible.
- Staff should not smell of smoke or use perfume
- Women should have easy access to a supply of clean vomit bowls
- Used vomit bowls should be cleared away promptly
- Ensure timely medication administration to enable stable blood levels of anti-emetics
- Assist women with personal hygiene
- Staff should ask before discussing food with woman in case it triggers further vomiting
- Do not suggest use of ginger, sea bands etc. as are ineffective for severe NVP and HG and inaccurate information may cause mistrust in healthcare professionals
- Encourage rest
- Give written information/ support groups (Pregnancy Sickness Support)
- Advise women to seek early treatment for constipation caused by dehydration. Malnutrition, immobility or medication (Ondansetron)
- Reassure that any stress incontinence is not permanent. Encourage pelvic floor exercises
- Emotional and psychological support. Ensure that the woman feels that she is listened to and her symptoms believed. In extreme cases refer woman to the Perinatal Mental Health Team if appropriate.

2.8. Discharge
- Give TTO anti-emetics orally or PR even if the woman is well on discharge. Ensure that the woman is aware that Thiamine is needed as a vitamin supplement if she continues to vomit.
- Give dietary advice
- If the woman`s symptoms were severe enough to require medication inform her Community Midwife of discharge and arrange follow up after 24 hours to:
  - Check for ketones in the urine
  - Signs of dehydration(e.g. infrequent urination, dry mucous membranes, light-headedness)
  - Assess response to medication
### 3. Compliance and effectiveness

<table>
<thead>
<tr>
<th>Element to be monitored</th>
<th>The audit will take into account record keeping by midwives and medical staff. The audit will be registered with RCHT’s Audit Department.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>Antenatal Ward Manager</td>
</tr>
</tbody>
</table>
| Tool                    | - Was the correct referral pathway followed?  
- On admission was the first dose of antiemetic given IM/IV?  
- Was an adequate fluid balance chart kept on all patients?  
- With severe prolonged vomiting was the patient prescribed Thiamine 50mgs TDS?  
- Did the patient have 4 hourly MEOWS?  
- Was a urinalysis taken for each specimen of urine? |
| Frequency               | 1% or 10 sets of notes, whichever is greatest, of all health records of patients admitted with hyperemesis gravidarum |
| Reporting arrangements  | - A formal report of the results will be received annually at the Obstetric Risk Management Forum and at the Clinical Audit Forum, as per the audit plan.  
- During the process if the audit compliance is <75% or other deficiencies identified, this will be highlighted at the next Obstetric Maternity Risk Management Forum and Clinical Audit Forum and an action plan agreed. |
| Acting on recommendations and Lead(s) | - Any deficiencies identified will be discussed at the Obstetric Risk Management Forum and Clinical Audit Forum and an action plan developed.  
- Action leads will be identified and a time frame for action to be completed.  
- The action plan will be monitored by the Maternity Risk Manager until all actions are complete. |
| Change in practice and lessons to be shared | - Required changes to practice will be identified and actioned within a time frame agreed on the action plan.  
- A lead member of the forum will be identified to take each change forward.  
- The results of the audits will be distributed to all staff through the Risk Management Newsletter. |

### 4. Equality and Diversity

4.1. This document complies with the Royal Cornwall Hospitals NHS Trust service Equality and Diversity statement which can be found in the ‘Equality, Diversity & Human Rights Policy’ or the [Equality and Diversity website](#).

4.2. **Equality Impact Assessment**

The Initial Equality Impact Assessment Screening Form is at Appendix 2.
## Appendix 1. Governance Information

<table>
<thead>
<tr>
<th>Document Title</th>
<th>HYPEREMESIS GRAVIDARUM (HG) AND SEVERE NAUSEA AND VOMITTING IN PREGNANCY (NVP) – CLINICAL GUIDELINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Issued/Approved:</td>
<td>31st July 2015</td>
</tr>
<tr>
<td>Date Valid From:</td>
<td>31st July 2015</td>
</tr>
<tr>
<td>Date Valid To:</td>
<td>31st July 2018</td>
</tr>
</tbody>
</table>
| Directorate / Department responsible (author/owner): | Karen Stoyles  
Obs and Gynae Directorate |
| Contact details: | 01872-252149 |
| Brief summary of contents | To inform midwives and obstetricians of care pathways and management for women suffering from Moderate - Severe Nausea and Vomiting in pregnancy (NVP) and Hyperemesis Gravidarum (HG). |
| Suggested Keywords: | Hyperemesis, Gravidarum, nausea, sickness, pregnancy, vomiting, severe |
| Target Audience | RCHT | PCH | CFT | KCCG |
| Executive Director responsible for Policy: | Medical Director |
| Date revised: | 31st July 2015 |
| This document replaces (exact title of previous version): | • Clinical guideline for Day-case rehydration for women with moderate Hyperemesis Gravidarum in pregnancy  
• Clinical guideline for In-patient guideline for Hyperemesis Gravidarum in pregnancy |
| Approval route (names of committees)/consultation: | Maternity Guidelines Group  
Obs and Gynae Directorate  
Divisional Board for notting |
| Divisional Manager confirming approval processes | Head of Midwifery |
| Name and Post Title of additional signatories | Not Required |
| Name and Signature of Divisional/Directorate Governance Lead confirming approval by specialty and divisional management meetings | {Original Copy Signed}  
Helen Ross-McGill -Women & Children’s Divisional Governance Lead |
HYPEREMESIS GRAVIDARUM (HG) AND SEVERE NAUSEA AND VOMITTING IN PREGNANCY (NVP) – CLINICAL GUIDELINE

Signature of Executive Director giving approval

{Original Copy Signed}

Publication Location (refer to Policy on Policies – Approvals and Ratification):

Internet & Intranet ✓ Intranet Only

Document Library Folder/Sub Folder

Clinical/Midwifery and Obstetrics

Links to key external standards

None

Related Documents:

- Dean C., Shortman A (2014) Hyperemesis Gravidarum: The Definitive Guide

Training Need Identified?

No

Version Control Table

<table>
<thead>
<tr>
<th>Date</th>
<th>Version No</th>
<th>Summary of Changes</th>
<th>Changes Made by (Name and Job Title)</th>
</tr>
</thead>
</table>
| 31st July 2015 | V1.0       | Initial Issue      | Karen Stoyles
                  |                          | Antenatal Ward & Day Assessment Unit Manager |

All or part of this document can be released under the Freedom of Information Act 2000

This document is to be retained for 10 years from the date of expiry.

This document is only valid on the day of printing

Controlled Document

This document has been created following the Royal Cornwall Hospitals NHS Trust Policy on Document Production. It should not be altered in any way without the express permission of the author or their Line Manager.
Appendix 2. Initial Equality Impact Assessment Form

<table>
<thead>
<tr>
<th>Name of the strategy / policy / proposal / service function to be assessed (hereafter referred to as policy) (Provide brief description):</th>
<th>HYPEREMESIS GRAVIDARUM (HG) AND SEVERE NAUSEA AND VOMITING IN PREGNANCY (NVP) – CLINICAL GUIDELINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directorate and service area:</td>
<td>Obs &amp; Gynae Directorate</td>
</tr>
<tr>
<td>Name of individual completing assessment:</td>
<td>Elizabeth Anderson</td>
</tr>
<tr>
<td>Telephone:</td>
<td>01872 2 2879</td>
</tr>
</tbody>
</table>

1. Policy Aim*  
Who is the strategy / policy / proposal / service function aimed at?  
To inform midwives and obstetricians of care pathways and management for women suffering from: Hyperemesis Gravidarum (HG) Moderate or severe nausea and vomiting in pregnancy (NVP).

2. Policy Objectives*  
To ensure that pregnant women with Hyperemesis Gravidarum or Severe Nausea and Vomiting in pregnancy receive the appropriate level of care.

3. Policy – intended Outcomes*  
Improved maternal experience for pregnant women with Hyperemesis Gravidarum or Severe Nausea and Vomiting.

4. *How will you measure the outcome?  
Compliance Monitoring Tool

5. Who is intended to benefit from the policy?  
Pregnant women with Hyperemesis Gravidarum

6a) Is consultation required with the workforce, equality groups, local interest groups etc. around this policy?  
No

b) If yes, have these *groups been consulted?  
N/A

C). Please list any groups who have been consulted about this procedure.  
N/A

7. The Impact  
Please complete the following table.

<table>
<thead>
<tr>
<th>Equality Strands:</th>
<th>Yes</th>
<th>No</th>
<th>Rationale for Assessment / Existing Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex (male, female, trans-gender / gender reassignment)</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Race / Ethnic communities/groups</td>
<td>X</td>
<td></td>
<td></td>
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<td>----------------------------------</td>
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<td></td>
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<tr>
<td>Disability - Learning disability, physical disability, sensory impairment and mental health problems</td>
<td>X</td>
<td></td>
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</tr>
<tr>
<td>Religion / other beliefs</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marriage and civil partnership</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pregnancy and maternity</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Sexual Orientation, Bisexual, Gay, heterosexual, Lesbian</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

You will need to continue to a full Equality Impact Assessment if the following have been highlighted:

- You have ticked “Yes” in any column above and
- No consultation or evidence of there being consultation- this excludes any policies which have been identified as not requiring consultation. or
- Major service redesign or development

8. Please indicate if a full equality analysis is recommended. | Yes | No | X |
9. If you are not recommending a Full Impact assessment please explain why.

N/A

Signature of policy developer / lead manager / director
Karen Stoyles

Date of completion and submission
31st July 2015

Names and signatures of members carrying out the Screening Assessment
1. Elizabeth Anderson
2.

Keep one copy and send a copy to the Human Rights, Equality and Inclusion Lead, c/o Royal Cornwall Hospitals NHS Trust, Human Resources Department, Knowledge Spa, Truro, Cornwall, TR1 3HD

A summary of the results will be published on the Trust’s web site.

Signed: Elizabeth Anderson

Date: 31st July 2015