

Hyperemesis in Pregnancy pathway - AED, Gynaecology and Maternity Patients

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| • Used for which patients? | All women within Women's Health and presenting to Adult Emergency Department |
| • Used by which staff? | All clinicians in Women's Health and AED/ CDU including access holder lead maternity carers (LMCs) |
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1. Purpose of guideline

The purpose of this guideline is to facilitate the safe and effective care for female patients who are pregnant that present to the Adult Emergency Department (AED) or Women’s Assessment Unit (WAU) with hyperemesis.

2. Responsibility

Registered nursing staff employed in AED/WAU who:

- Are level I or above
- Have completed the ‘Hyperemesis in Pregnancy’ training

All L2 AED and WAU registered nurses to have completed Standing Orders audit for:

- Metoclopramide Standing Order
- Sodium chloride 0.9% Intravenous Standing Order.

WAU RNs are also to complete the standing order audit for:

- Cyclizine Standing Order

3. Definitions

| Term | Definition |
|-------------|---|
| AED | Adult Emergency Department |
| ATS | Australasian Triage Score |
| Hyperemesis | Hyperemesis Gravidarum is a severe form of nausea and vomiting during early pregnancy. Persistent vomiting subsequently interferes with fluid intake and nutrition status resulting in malnutrition and or weight loss, fluid, and electrolyte and acid-base imbalance. |
| IVL | Intravenous line |
| MSU | Mid-stream urine |
| IV | Intravenous |
| SO | Standing Order |
| PO | Oral |
| TDS | Three times daily |
| WAU | Women’s assessment unit |
| U + E | Urea and electrolytes |
| FBC | Full blood count |

4. Inclusion criteria

Women who are ≤ 12 weeks pregnant with nausea and vomiting or > 12 weeks pregnant with documented history of hyperemesis.

5. Exclusion criteria

- ATS 1 or 2
- Females >12 weeks pregnant with no documented history of hyperemesis
- HR < 50 or >120, SBP <80 or > 130, DBP >90
- High risk pregnancy
- Anuria >4 hours
- Altered GCS
- Visual disturbance
- Headache
- Confusion
- Ataxia
- PV bleeding
- Abdominal pain
- Fever
- Diarrhoea
- All other conditions in pregnancy

6. Procedure

| Section | Procedure |
|--|--|
| 1. Commence pathway | Initiate and click the hyperemesis pathway on the whiteboard for all women that meet both the inclusion and exclusion criteria. |
| 2. Nurse assessment | Vital signs to be performed and documented |
| 3. Initiate procedures and investigations | <ol style="list-style-type: none"> 1. Insert IV line 2. Take bloods for FBC, U + E, 3. Weigh patient and document pre-pregnancy weight and use calculation on page 2 (of pathway) to work out percentage weight loss. (Note: AED - If this is unable to be done on arrival, it will need to be done at some stage during the patient's admission) 4. Do MSU and note ketones. |
| 4. Choose hyperemesis pathway | <p>Use the severity assessment tool and tick the box that matches the closest for:</p> <ul style="list-style-type: none"> • Duration • Oral fluid tolerance • Urinary ketones • Weight loss <p>Assign the pathway based on the column with the highest singular positive criteria related to the Mild (green), Moderate (orange) or Severe (red) column; then follow the designated matching colour pathway.</p> |

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| <p>5. Treatment box 1</p> <p>(all patients are to start with this treatment at time of nurse assessment)</p> | <p>At the nurse’s assessment, all patients on all pathways (green, orange, red) are to receive:</p> <ol style="list-style-type: none"> 1. One dose of the first line anti-emetic metoclopramide 2. Intravenous infusion of sodium chloride 0.9% 3. Oral fluid as tolerated 10 mL/10 min initially 4. Plain food as tolerated eg toast/butter 5. For moderate and severe hyperemesis: 6. Chart Folic Acid, Iodine, Thiamine and Pyridoxine (see formulary on Hyperemesis in Pregnancy document) <p>Note:</p> <ul style="list-style-type: none"> • Metoclopramide and sodium chloride 0.9% are available as standing orders for all > L1 nurses • Oral folic acid is to be charted by medical staff in either AED or followed up by the Gynaecology team for all patients. |
| <p>6. Hyperemesis pathway</p> | <p>Green and orange pathway: continue to box 7.</p> <p>Red pathway: if the patient is on the severe pathway they can be referred directly to WAU for admission concurrently with the initiation of treatment box 1 (action 5) and transferred as soon as possible.</p> <p>If WAU do not have beds available within the next hour, the patient can be transferred to CDU with the WAU team responding to see the patient within 60 minutes of transfer.</p> |
| <p>7. One hour review post treatment box 1</p> | <p>The medical staff are to review the patient at one hour after the nurse initiating treatment box 1.</p> <p>Clinical improvement: If the patients symptoms are improving and the patient is tolerating oral fluids they will be reviewed for discharge. Refer to the discharge checklist in the Hyperemesis in Pregnancy document</p> <p>No clinical improvement: If the patient is not improving to treatment then continue with Mild/Moderate Pathway Treatment Box 2 in section 8.</p> |
| <p>8. Treatment box 2</p> | <p>Mild/Moderate Pathway (green and orange colour)</p> <ol style="list-style-type: none"> 1. One dose of the 2nd line anti-emetic cyclizine 2. Intravenous infusion of sodium chloride 0.9% 3. Recheck urinary ketones via MSU 4. Continue oral fluid as tolerated 10 mL/10 min initially 5. Continue plain food as tolerated eg toast/butter |

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| <p>9. Two hour review post treatment box 2</p> | <p>Clinical improvement: If patient’s symptoms are improving and the patient is tolerating oral fluids, they will be reviewed for discharge. Refer to the discharge checklist in the Hyperemesis in Pregnancy document</p> <p>No clinical improvement: If the patient is not improving to treatment box 2, then the patient is to be referred to WAU for admission. If WAU do not have beds available within the next hour, the patient can be transferred to CDU for continuing care and investigations.</p> <p>The AED team are to chart the next pathway intravenous fluids and medications for all patient transfers to CDU.</p> <p>The WAU team will respond to see the patient within 60 minutes of transfer.</p> |
| <p>10. Discharge criteria and checklist</p> | <p>Discharge criteria (all must be met):</p> <ul style="list-style-type: none"> • Senior Doctor agrees with discharge plan • Tolerating oral fluids • Significant clinical improvement <p>Discharge checklist:</p> <ul style="list-style-type: none"> • Prescription for pregnancy supplements and on-going anti-emetics (see section 7) • Hyperemesis patient information sheet provided • Ultrasound (if not already undertaken 09 307 2811) Indication: exclude molar or multiple pregnancy To return to L9 or to be arranged by GP or LMC • Complete follow up box on EDS: POAC GP/LMC Dietician Referral |

7. Prescribing medication

Anti-emetics

First line

| | Route | Dose and frequency |
|----------------|------------|--------------------|
| Metoclopramide | IV, IM, PO | 5 - 10 mg TDS* |

Second line

| | Route(s) | Dose and frequency |
|-------------|--------------------|--------------------|
| Cyclizine | IV**, PO | 25-50 mg q8h |
| Ondansetron | IV, PO, Buccal *** | 4-8 mg q8 - 12h |

| | | |
|------------------|----------|-------------------------------|
| Prochlorperazine | PR PO | 25 mg q12h 5-10 mg q6 - 8h |
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** 5 mg in young adults 15 – 19 years, body-weight under 60 kg*

***Give as a slow IV push to avoid dizziness. May be diluted with an equal volume of water for injection or glucose 5%. Dilution with sodium chloride 0.9% should be avoided due to risk of crystallization*

****The use of ondansetron wafers/orodispersible tablets should be considered due to better absorption and cost*

Vitamins and Minerals

| All women | Route(s) | Dose and frequency |
|------------------------------|---------------------------|----------------------|
| Folic acid (first trimester) | PO | 5 mg daily |
| Iodine | PO | 150 micrograms daily |
| Pyridoxine (Vitamin B6) | PO, IV (IV Section 29) | 25 mg - 8 hourly |
| Thiamine (Vitamin B1) | PO IV, IM (Section 29) | 100 mg daily |

8. Standing Orders for WAU nurses

Under Standing Order, WAU registered nurses can administer sodium chloride 0.9% via IV infusion for the purpose of rehydration.

WAU nurses can also administer these anti-emetics via Standing Orders:

- Metoclopramide
- Cyclizine

Please refer to the [Standing orders](#) documents in WAU for instructions on how to action a Standing order. You can also find these documents on the Pharmacy Intranet page. Staff can also refer to the Hyperemesis in Pregnancy flow chart for detailed information on administering these medications.

9. Discharge

The discharge criteria must be met and checklist all completed before a patient is discharged – refer to the Hyperemesis in Pregnancy flow chart CR3096 (see [clinical forms](#)).

10. POAC (primary options for acute care)

- Hyperemesis can be managed in the community through POAC.
- A referral letter/POAC number is not required however POAC follow up needs to be documented on EDS
- Tick the “POAC box” in Patient information section of the Discharge Summary
- The patient can present to POAC at any time during this pregnancy as long as it is for Hyperemesis

- POAC care is provided by both GPs and after-hours clinics
- Patients can choose to follow up with their registered GP or a walk in clinic
- There is a list of providers on the POAC intranet site
- Most GPs require an appointment to be made; the after-hours' clinics usually do not

11. Supporting evidence

- Abas, M. N., Tan, P. C., Azmi, N., & Omar, S. Z. (2014). Ondansetron compared with metoclopramide for hyperemesis gravidarum: a randomized controlled trial. *Obstetrics & Gynecology*, 123(6), 1272-1279.
- Pasternak, B., Svanström, H., Mølgaard-Nielsen, D., Melbye, M., Hviid, A. (2013). Metoclopramide in Pregnancy and Risk of Major Congenital Malformations and Fetal Death. *JAMA*, 310(15), 1601–1611. doi:10.1001/jama.2013.278343
- Smith, J., Refuerzo, J., & Ramin, S. (2014). Treatment and outcome of nausea and vomiting of pregnancy. *UpToDate*. Waltham, MA (accessed 8 Jun 2013).
- Pasternak, B., Svanström, H., & Hviid, A. (2013). Ondansetron in pregnancy and risk of adverse fetal outcomes. *New England Journal of Medicine*, 368(9), 814-823.

12. Associated documents

- Code of Rights
- Informed Consent
- Intravenous Fluid Prescription - Adult
- Medications - Administration
- Medications - Prescribing
- Nausea and Vomiting of Pregnancy (Hyperemesis) (April 2018)

Clinical forms

- [Hyperemesis in Pregnancy Flowchart \(CR3096\)](#)

Standing orders

- [Metoclopramide](#)
- [Cyclizine](#)
- [Sodium Chloride 0.9%](#)

13. Disclaimer

No guideline can cover all variations required for specific circumstances. It is the responsibility of the health care practitioners using this Auckland DHB guideline to adapt it for safe use within their own institution, recognise the need for specialist help, and call for it without delay, when an individual patient falls outside of the boundaries of this guideline.

14. Corrections and amendments

The next scheduled review of this document is as per the document classification table (page 1). However, if the reader notices any errors or believes that the document should be reviewed **before** the scheduled date, they should contact the owner or [Clinical Policy Facilitator](#) without delay.