Brighton and Sussex University Hospitals NHS Trust

Vomiting in Pregnancy and Hyperemesis Gravidarum

Gynaecology Protocol: GP002
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Guideline Reviewer:	Tosin Ajala
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Contents

Key Principles

These guidelines and algorithms are aimed to assist in decision making. They are not designed to be prescriptive and you are not expected to use them in exclusion of discussions with senior colleagues.

Evidence used to inform these guidelines had been drawn from national/RCOG guidelines where available. Where applicable other references are quoted.

These guidelines have been reviewed by all clinicians involved in early pregnancy care, including consultants, trainees and specialist and senior nursing staff.

A protocol is a set of measurable, objective standards to determine a course of action.

Professional judgement may be used in the application of a protocol.

Scope

These guidelines apply to women having problems in the early part of pregnancy relating to nausea and vomiting, which may require admission in some cases

Responsibilities

Midwives, Nurses & Obstetricians:

- To access, read, understand and follow this guidance
- To use their professional judgement in application of this guidance

Management Team:

- To ensure the guideline is reviewed as required in line with Trust and National recommendations
- To ensure the guideline is accessible to all relevant staff

1.0 Baseline Assessment

1.1 Nausea and vomiting in pregnancy are very common

1.2 Many women will experience symptoms in the 1st trimester but few will require regular medication or admission.

1.3 For some women the symptoms lead to intractable nausea and vomiting which may then lead to the need for intravenous fluids and regular IV anti-emetics i.e. Hyperemesis Gravidarum (HG)

1.4 Women with HG:

1.4.1 Show marked ketouria and urinary tract infections are often detected and can exacerbate nausea and vomiting in pregnancy.

1.4.2 Commonly are hyponatraemic, hypokalaemic and have a low serum urea

1.4.3 May have a raised liver transaminase(>50 but less than 200u) and mildly elevated bilirubin (jaundice is uncommon) in up to 15% of cases. These are markers of severe vomiting in pregnancy and will correct once vomiting is controlled

1.4.4 Significant elevation of transaminases (>200) or jaundice when present should prompt the search for viral hepatitis

1.4.5 Often worse in women with multiple pregnancies or molar pregnancies and hence a pelvic ultrasound is useful to make these diagnoses (If not already performed)

1.5 Women with HG require emotional support with frequent reassurance and encouragement. They will need help in developing strategies for dealing with their nausea and vomiting at home. It is rare to be able to remove all symptoms with medication.

1.6 Quantification of the degree of symptomology may be useful. PUQE scoring (pregnancy-unique quantification of emesis and nausea) has been developed and validated on HG patients. The score is calculated using the following system:

1.6.1 It should be performed on admission and every 24 hours after that.

1.6.2 The treatment goal is to get women into the mild category before discharge

1.7 PUQE Score

PUQE Score				
Q1	In the last 12 hours for how long have you felt nauseated or sick to your stomach?			
1	**2**	**3**	**4**	**5**
Not at all	Less than 1 hour	2-3 hours	4-6 hours	More than 6 hours
Q2	In the last 12 hours, how many times have you vomited or thrown up?			
1	**2**	**3**	**4**	**5**
None	1-2 times	3-4 times	5-6 times	7 or more times
Q2	In the last 12 hours, how many times have you had retching or dry heaves without bringing anything up?			
1	**2**	**3**	**4**	**5**
Not at all	1-2 times	3-4 times	5-6 times	7 or more times
Grade of disease (based on total score)				
Mild (less than 6)	Moderate (6-12)	Severe (more than 12)		

2.0 Primary Care Management

2.1 Women can be successfully managed by primary care for nausea and vomiting related to pregnancy. All anti-emetics are safe to be used in pregnancy and GPs should be referred to the guidelines and protocols on the local women's health website (www.whbs.org.uk) .

3.0 Care Management

3.1 In some women it may be possible to administer fluids and anti-emetics within the gynaecology assessment unit or ward areas and avoid subsequent admission.

3.1.1 All women should be considered for acute management

3.1.2 Low threshold for admission should be considered for those women with initial PUQE scores in the severe range and those with raised liver transaminases on admission.

3.2 Acute treatment comprises:

3.2.1 Intravenous fluids: 2 litres 0.9% Saline (+20mmol KCL in each bag) over a total 4 hours (2 hours per litre). It is safe to give up to 10mmols of KCL per hour.

3.2.2 Intravenous anti-emetic: 50mg Cyclizine IV stat

3.3 Women who respond to acute treatment can be discharged home within 4-6 hours with appropriate medications. To include:

3.3.1 Thiamine 50mg po tds, Folic acid 5mg po od, Cyclizine 50mg po tds

3.3.2 All medications should be prescribed for 2 weeks initially.

3.3.3 Thiamine and folic acid can be stopped once a normal diet is tolerated.

3.3.4 All patients seen as acute episodes still require a discharge summary on EDS to inform GP of planned further care, especially continuation of prescribing.

3.3.5 Consider Gynaecology assessment unit (GAU) appointment if **not first** attendance (either as acute or inpatient) and patient under 12 weeks.

3.3.6 Ensure woman has patient information leaflet.

3.4 Women who fail to respond to acute treatment will require admission and further treatment as outlined below.

4.0 Inpatient Management

4.1 Once admitted these women require close assessment and review of anti-emetic medication. Main clinical priorities are:

4.1.1 Continued appropriate fluid management 3-4 litres 0.9% Saline (+40mmol KCL in each bag) over 24 hours

4.1.2 Regular antiemetics, starting with intravenous Cyclizine (50mg IV tds)

4.1.3 An alternative first line drug is oral/im Promethazine hydrochloride 20-25mg PO/IM maximum 100mg in 24 hours (See algorithm p.9-11)

4.1.4 Use of multiple as required anti-emetics is discouraged. As new anti-emetics are added as per protocol only two regular medications should be prescribed at one time.

4.2 Women who do not improve within 24 hours should have their anti-emetic medication reviewed and altered as appropriate. Escalation through medication should follow the below algorithm. Medications should be used in the following order:

Second line: Prochlorperazine
Metoclopramide (not licensed for people under 20 years old and is known to cause oculogyric crisis, especially in young adults). Treatment with metoclopramide should not be prescribed for longer than 5 days.(EMA 2013)

Third line: Ondansetron

Fourth line: Hydrocortisone/Prednisolone

(For dosing information please see BNF)

4.3 The evidence concerning the use of corticosteroids for treating severe hyperemesis is lacking. There have been a number of trials published that are of poor methodological quality, with small numbers of patients included. The evidence from these studies is conflicting. At present there is no obvious harm from a trial of corticosteroids. However it should be stressed with patients that this treatment does not have proven worth. Treatment involves use of IV and oral steroids. Agents used are:

4.3.1 Initial: Hydrocortisone: 50mg IV twice a day, for 48 hours

4.3.2 Subsequent: Prednisolone: 20mg orally twice a day for total of 7 days.

4.4 Women who do not respond to the full range of medications and corticosteroids may require total parenteral nutrition (TPN). Decisions regarding this must be made at consultant level.

4.5 Review of PUQE scores each 24 hours is required to assess progress and plan discharge once patients are stable on oral medication and PUQE scores in mild category then discharge home.

4.6 A proportion of women with hyperemesis will develop marked symptoms of heartburn or oesophagitis. These may progress to the presence of blood specked vomits or even in severe cases haematemesis. For basic symptomology consider use of the following cytoprotective agents:

4.6.1 First line treatment with Ranitidine (150mg bd orally)

4.6.2 Second line treatment with Omeprazole (20mg once or twice daily orally)

4.7 Women who are admitted with hyperemesis require follow up in GAU (if less than 12 weeks) or antenatal clinic (ANC) if greater than 12 weeks. There is no definite risk to pregnancy associated with hyperemesis but follow up is advised to ensure improvement is sustained. At the RSCH site this follow up if in antenatal clinic can be made with a consultant. At the PRH site this can be with the admitting consultant.

4.8 When discharged, women with hyperemesis require continuation of all medications. In addition to regular anti-emetics these should include:

4.8.1 Thiamine 50mg po tds and Folic acid 5mg po od whilst not tolerating a normal diet.

4.8.2 Cytoprotection agents where required

4.8.3 All medications should be prescribed for 2 weeks initially.

4.8.4 All patients seen require a discharge summary on EDS to inform GP of planned further care, especially continuation of prescribing.

4.8.5 Ensure woman has patient information leaflet.

5.0 Evidence Base

5.1 As with many areas of pregnancy and childbirth, the medications outlined in this guideline are being used off licence. There is however a growing body of evidence to confirm safety of use of the medications.

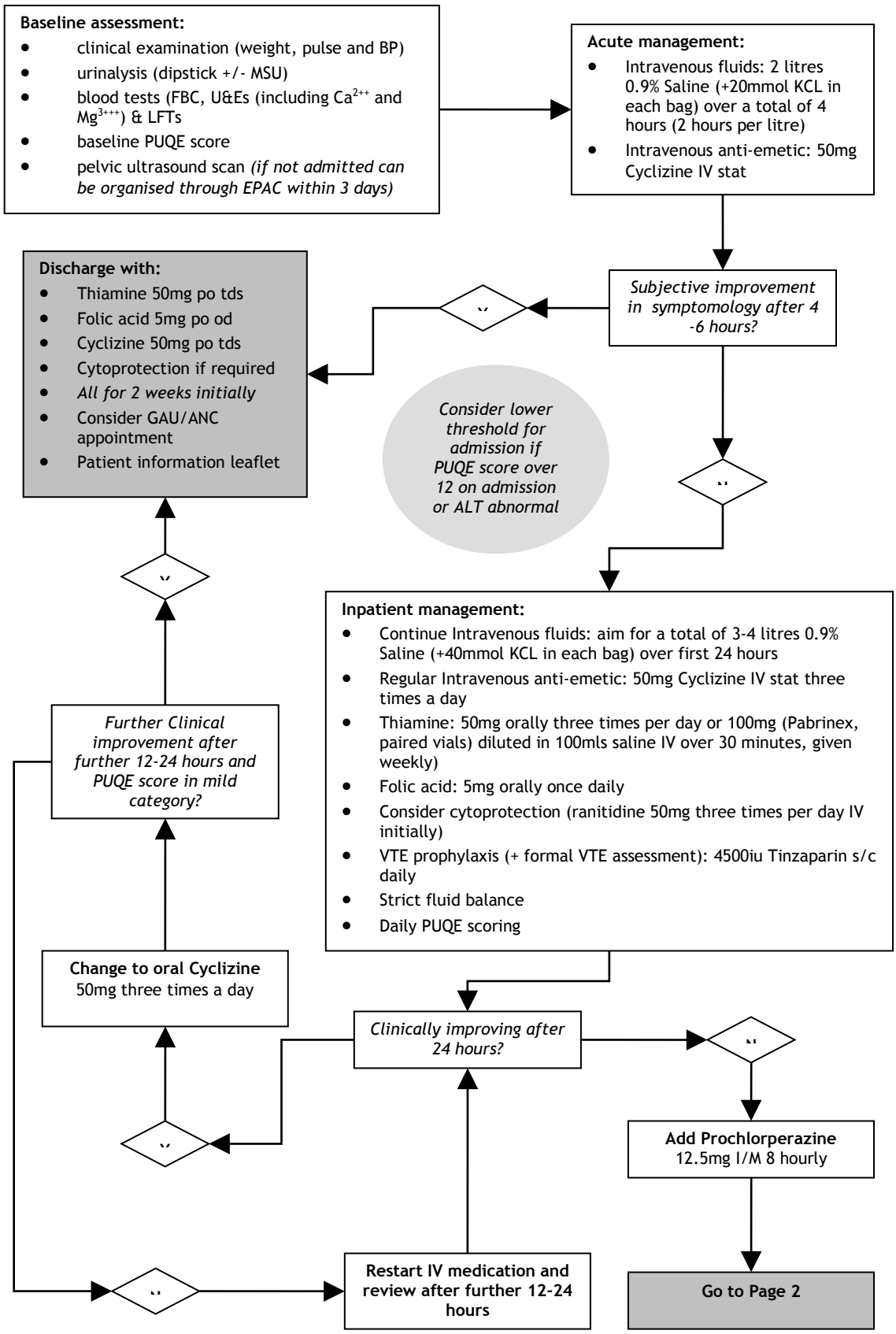
5.2 It is vital to maintain effective treatment for these women to prevent further admissions. Reassurance to both the women, their partners and their own general practitioners about the safety of the treatments is vital.

5.3 No national guidance exists for the treatment of hyperemesis and hence the algorithms below are derived from expert opinion and with reference to primary research.

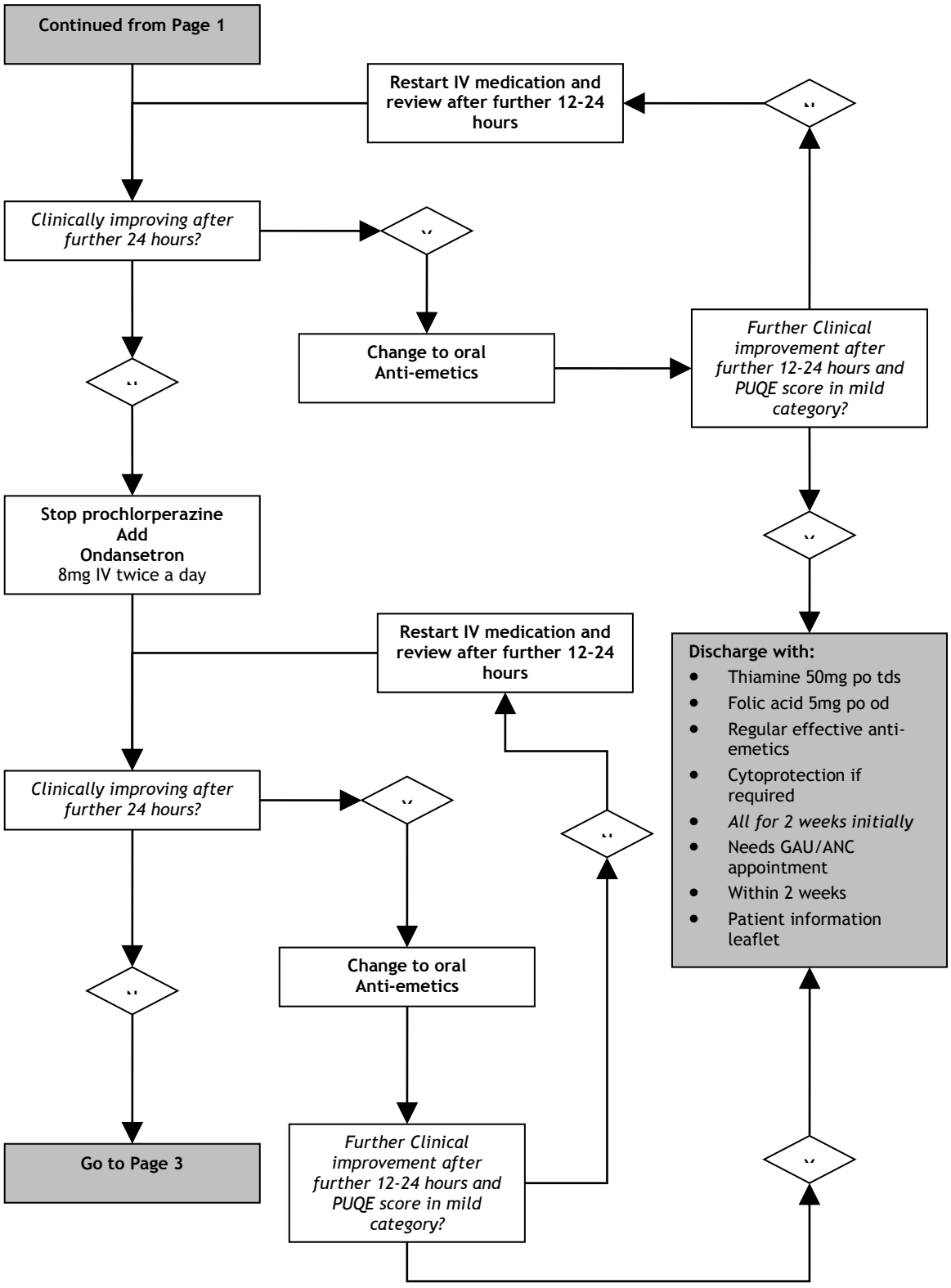
6.0 Training

Please refer to the Training Needs Analysis document for details on staff training in relation to this protocol.

7.0 Hyperemesis Gravidarum management algorithm (page 1)



Hyperemesis Gravidarum management algorithm (page 2)



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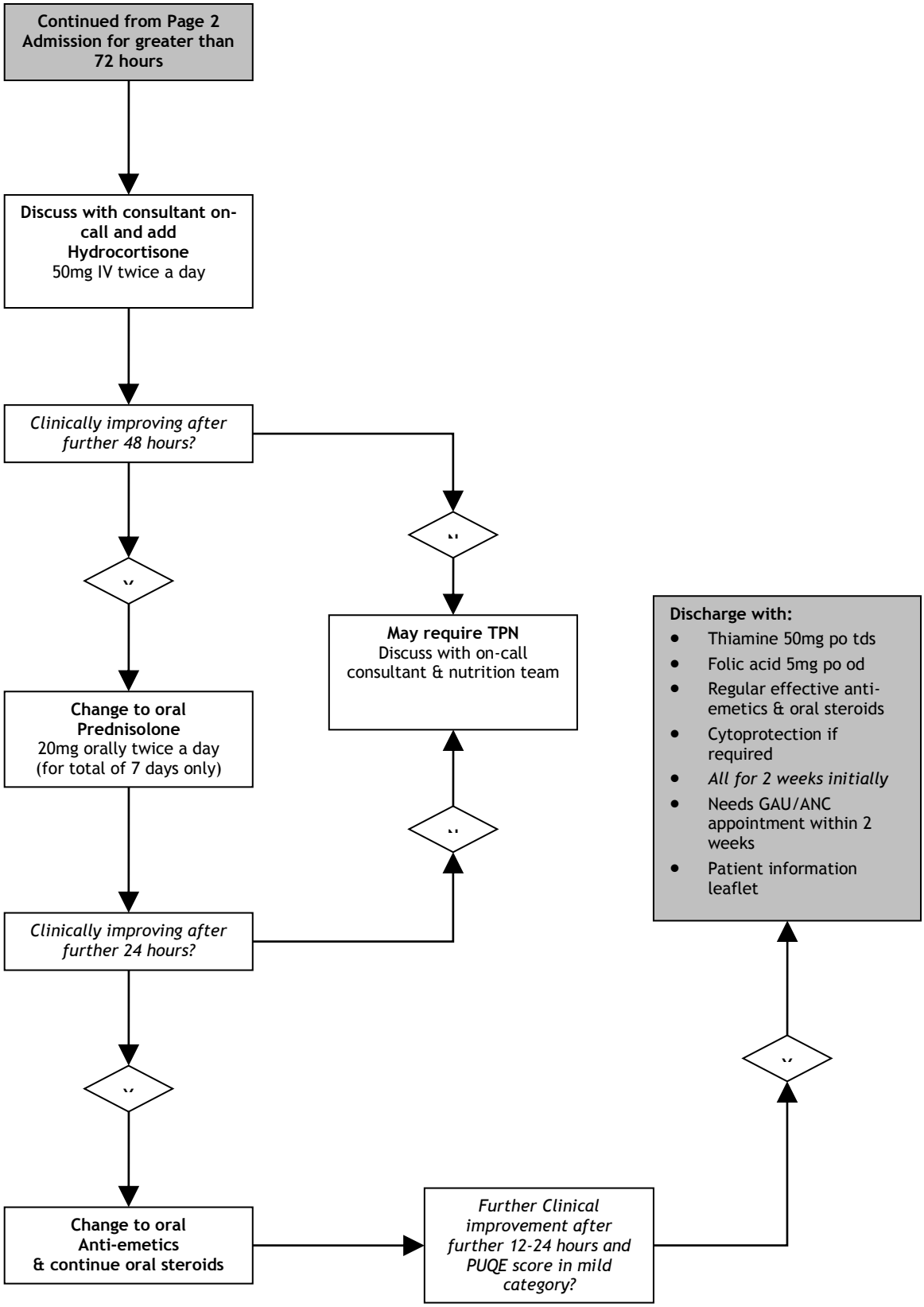

8.0 References

The main systematic review on the Cochrane library that looks at pharmacological interventions in the group is out of date and going through a major review at present. In addition there are two large RCTs running looking at the use of outpatient management for this condition using similar protocols to above that are die to report shortly.

Additional references

The Pregnancy Unique Quantification of Emesis (PUQE) for morning sickness. Maltepe C, Einarson A, Koren G. Am J Obstet Gynecol. 2008 Jan;198(1):71.e1-7.

Motherisk-PUQE (pregnancy-unique quantification of emesis and nausea) scoring system for nausea and vomiting of pregnancy., Boskovic R, Hard M, Maltepe C, Navioz Y, Einarson A. Motherisk Program, The Hospital for Sick Children, Toronto, Ontario, Canada.

Earl R, Crowther CA, Middleton P. Interventions for preventing and treating hyperthyroidism in pregnancy. Cochrane Database of Systematic Reviews 2010, Issue 9. Art. No.: CD008633. DOI: 10.1002/14651858.CD008633.pub2.

NICE, Clinical Knowledge Summaries: Nausea/vomiting in pregnancy
Last revised in June 2013