Acid Aspiration Prophylaxis

Classification:	Guideline
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Departments/Group this Document applies to:	Obstetricians, midwives, anaesthetists, medical staff, nursing staff

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Guideline to be followed by (target staff): The document applies to maternity units and surgical wards caring for pregnant women requiring incidental surgery. In particular, midwives, obstetricians, anaesthetists and nursing staff.

To be read in conjunction with the following documents:
· Enhanced Recovery for Women following Caesarean Birth Guideline
· PGD MKnnn-2022 Omeprazole Pre-Op LSCS

CQC Fundamental standards:
Regulation 12 – Safe care and treatment

Disclaimer

Since every patient's history is different, and even the most exhaustive sources of information cannot cover every possible eventuality, you should be aware that all information is provided in this document on the basis that the healthcare professionals responsible for patient care will retain full and sole responsibility for decisions relating to patient care; the document is intended to supplement, not substitute for, the expertise and judgment of physicians, pharmacists or other healthcare professionals and should not be taken as an indication of suitability of a particular treatment for a particular individual.

The ultimate responsibility for the use of the guideline, dosage of drugs and correct following of instructions as well as the interpretation of the published material **lies solely with you** as the medical practitioner.

Index

Inclusivity Statement

In this guideline, we use the terms woman and women's health. We acknowledge however that people who do not identify as women will use our services. We aim to give all those who access the maternity service, appropriate, inclusive and care sensitive to their individual needs.

Guideline Statement

Pulmonary aspiration is defined as the inhalation of foreign material below the level of the vocal cords and into the lower respiratory tract (Clayton 2004, Lykens 1993). A national audit conducted by the Royal College of Anaesthetists (NAP4) identified aspiration as the commonest cause of death in association with complications of airway management (Cook, 2011). The factors increasing the risk of aspiration associated with pregnancy include the gravid uterus, progesterone-mediated lower oesophageal sphincter relaxation, lower gastric pH and delayed gastric empyting during labour (Pinder, 2006).

Aspiration of acidic gastric content is more harmful than non-acidic content. Therefore, it is important to neutralise the acidic gastric content.

Note: Acid prophylaxis pre-operatively is an unlicenced use of Omeprazole recognised by section 1.4.18. of NICE guideline [NG192] Caesarean birth March 2021

Executive Summary

To provide health care professionals with clear guidance of the management of acid aspiration prophylaxis for expectant women:

- During labour,
- If requiring operative delivery,
- Those needing incidental surgery during pregnancy.
- Or procedures within 48 hours after delivery.

Definitions

Pulmonary aspiration of gastric contents causes Acid Aspiration Syndrome, known as Mendelson's Syndrome, when the volume aspirated into the lungs exceeds 25ml and has an acidic pH (less than 2.5). It could be the reason for severe morbidity and mortality
The incidence of Mendelson's syndrome is reduced by antacid prophylaxis for women having an emergency or elective operative delivery.
Reducing the volume and raising the pH of gastric contents is necessary to reduce the possibility of aspiration and damage caused by it, if it occurs.
Acid aspiration prophylaxis has been practiced for many years. NICE guidance now exists for low risk and higher risk pregnant women in labour (NICE Intrapartum Care 2017).
All women undergoing Caesarean section should be offered acid aspiration prophylaxis. (NICE [NG192] Caesarean birth March 2021 section 1.4.18).

Roles and Responsibilities:

Antacid prophylaxis is the responsibility of the team looking after the woman. So the medical team in charge of the woman should prescribe when appropriate and the midwife/nursing staff should administer them as prescribed.
For women undergoing elective obstetric procedures:
· A Patient Group Direction PGD is in place for supply of 2 doses of Omeprazole at Pre-Operative Assessment for women to self-administer the night before and morning prior to procedure, or administration of a single dose by an authorised Midwife if the woman omits one or more doses.
· It is the responsibility of the team to ensure that adequate antacid prophylaxis has been administered before the procedure takes place.

2.0 Implementation and dissemination of document

The document applies to maternity units and to surgical wards where mothers require incidental surgery. It is for midwives, obstetricians, anaesthetists, medical and nursing staff.
The document can be accessed in the maternity domain of the clinical guidelines on the hospital intranet.
The PGD for supply or administration of Omeprazole for elective Caesarean Birth is available on the Trust's Intranet at Clinical documentation > Medicines Management > Patient Group Directions > Maternity

3.0 Processes and procedures

3.1. Women with uncomplicated labour:

- Advise the woman that they can drink clear fluids during established labour and that isotonic drinks, to prevent ketosis, may be more beneficial than water. Advise them that they may also eat in established labour.
- Acid prophylaxis is not required unless circumstances change.

3.2 Women with complicated/complex labour who are more likely to undergo general anaesthesia, for example:

a. BMI > 40 at booking

b. Multiple pregnancy

c. Breech presentation

d. Oxytocin for augmentation

e. Pathological CTG / foetal scalp pH done

f. Significant meconium staining of liquor

g. VBAC

h. Diabetes

i. APH

j. Pregnancy induced hypertension or pre-eclampsia

k. Concerns regarding fetal growth
l. Premature labour < 36 weeks
m. Epidural for labour

- Advise the woman that they can drink clear fluids during established labour and that isotonic drinks, to prevent ketosis, may be more beneficial than water.

- Advise them that there is no evidence to support restrictions on eating in labour, however there are no studies looking specifically at this group. If they do wish to eat in labour, a soft diet is recommended.

- They should be given Omeprazole 20mg every 12h orally during established labour.

3.3 Women undergoing elective obstetric procedures (e.g. Caesarean section under general anaesthesia or central neuraxial block)

- 20mg Omeprazole at 10pm the night before their caesarean section and a further 20mg Omeprazole at 6am on the morning of surgery
- Packs of two oral doses of Omeprazole may be supplied under PGD at Pre-Operative Assessment for self-administration prior to procedure by the woman, as above;
- If the woman omits one or more doses, the PGD also empowers authorised midwives to administer the morning dose of Omeprazole on admission
- Sodium citrate (0.3 MOLAR) 30ml to be given in theatres if procedure is under general anaesthesia. Metoclopramide 10mg orally may be added at discretion of anaesthetist (e.g. diabetic patient)
- They should not eat food or drink milk in the six hours prior to anaesthesia. They may drink water or other clear, non-fizzy fluids (Black tea, coffee, isotonic drinks) until 2 hours prior to anaesthesia.

3.4 Women requiring Emergency Anaesthesia:

- Omeprazole 20mg orally given by the midwife before transfer to theatre (unless already given in the last 12 hours). This will not be working at induction of general anaesthesia but will be working by the time of extubation when acid aspiration is still possible.
- Sodium citrate 30ml to be given immediately prior to induction of general anaesthesia.

NOTE:

A. Pregnant women greater than 20 weeks gestation for elective obstetric or non-obstetric procedures should be managed as above.

B. Post-partum, they should have full antacid prophylaxis for all procedures up to 48 hours post-delivery (including a rapid sequence induction with a cuffed endotracheal tube for general anaesthetic)

4.0 References

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5.0 Governance

5.1 Record of changes to document

Version	Date	Name	Reason
1	**2005**	**Anaesthetic Team**	**New**
	10/2008		**Review date extended**
	5/2009 & 9/2009		**Review date extended**
2	**02/2010**	**Emma Brandon**	**Review and update**
3	**06/2013**	**Graziana Massolini**	**Reviewed and updated**
5	04/2019	Eleanor Tyagi	Sections 3.1 and 3.2 reviewed and updated to better reflect the NICE intrapartum care guidelines.
6	04/2022	Eleanor Tyagi	Oral ranitidine removed due to national shortage, changes made to oral intake in labour to reflect Cochrane review and to respect the rights/wishes of women
7	05/2022	Eleanor Tyagi	Updated to incorporate pharmacy comments and from Anja. Dose of 40mg omeprazole based on increased acid suppression with this dose.
8	05/02	Eleanor Tyagi	Omeprazole dose changed back to 20mg based on lack of evidence to support 40mg

5.2 Consultation History

Stakeholders Name/Board	Area of Expertise	Date Sent	Date Received	Comments	Endorsed Yes/No
Jayne Plant	Library	27/03/2019	22/05/2019	Received	Yes
Alan Dutta-Plummer	Pharmacist	02/04/2019		Nil comments received	
Francisca Mngola	Pharmacist	02/04/2019	24/05/2019	Comments received	Yes
Obstetric Anaesthetists	Obstetric Anaesthesia	April 2019		No changes	
All staff in Women's health – consultants, junior doctors and midwives	Maternity	02/05/2019		See individual comments	
Julie Cooper	Maternity	15/05/19		Removed a line about this guideline being included in midwifery teaching and changed 'products of conception' to	Yes

				baby	
Trevor Jenkins	Pharmacy		4/5/22	~~Change dose to 40mg~~	Yes
Janice Styles	Midwife		May 2022	Make the woman/birthing person terminology consistent throughout guideline	Changed as per Anja's comment below
Anja Johansen-Bibby	Obstetrician		May 2022	Include an inclusivity statement and then can use woman/mother /service user. Include pre-eclampsia. Remove ranitidine. ~~Omeprazole dose is 20mg~~	~~All except the omeprazole dose, this has been increased to 40mg to raise the pH of the gastric contents further~~

5.3 Audit and monitoring

This Guideline outlines the process for document development will be monitored on an ongoing basis. The centralisation of the process for development of documents will enable the Trust to audit more effectively. The centralisation in recording documents onto a Quality Management database will ensure the process is robust.

Audit/ Monitoring Criteria	Tool	Audit Lead	Frequency of Audit	Responsible Committee/ Board		
Part of an audit of caesareans under general anaesthesia	RCOA QI Compendium Chapter 7 Audit 7.5	Anaesthetic Team	Every 2 years	Women's Health CIG	Anaesthetic Team	

5.4 Equality Impact Assessment

As part of its development, this Guideline and its impact on equality has been reviewed. The purpose of the assessment is to minimise and if possible remove any disproportionate impact on the grounds of race, gender, disability, age, sexual orientation, religion or belief, pregnancy and maternity, gender reassignment or marriage and civil partnership. No detriment was identified. Equality Impact assessments will show any future actions required to overcome any identified barriers or discriminatory practice.

Equality Impact Assessment			
Division	Women and Children's Health	Department	Maternity
Person completing the EqIA	Eleanor Tyagi	Contact No.	
Others involved:		Date of assessment:	Jun 2022
Existing policy/service	Yes	New policy/service	N/A

Will patients, carers, the public or staff be affected by the policy/service?	Yes
If staff, how many/which groups will be affected?	All maternity staff

Protected characteristic	Any impact?	Comments
Age	NO	Positive impact as the policy aims to recognise diversity, promote inclusion and fair treatment for patients and staff
Disability	NO	
Gender reassignment	NO	
Marriage and civil partnership	NO	
Pregnancy and maternity	NO	
Race	NO	
Religion or belief	NO	
Sex	NO	
Sexual orientation	NO	

What consultation method(s) have you carried out?
Email to staff (anaesthetic, women's health and pharmacy) as part of the consultation period. Will be discussed at the guideline review group meeting.
How are the changes/amendments to the policies/services communicated?
Guideline review group, Guideline monthly memo
What future actions need to be taken to overcome any barriers or discrimination?

What?	Who will lead this?	Date of completion	Resources needed
Review date of EqIA	Jun 2025		