BUSINESS RULE COVER SHEET

Health
South Eastern Sydney
Local Health District

Prince of Wales/Sydney-Sydney Eye Hospitals and Health Services

Pre-Operative/Procedural Fasting for Patients Undergoing Anaesthesia and Procedural Sedation POWH/SSEH CLIN043

Target Audience:

- Registered and Enrolled Nurses
- Anaesthetists
- Surgeons
- Medical Officers

Purpose Statement

This Business Rule documents the process for the provision of Preoperative Oral Fluids prior to anaesthesia, ie 'Sip til Send'. It incorporates the best practice regarding fasting requirements of POWH/SSEH patients undergoing procedures that require procedural sedation or general anaesthesia.

The overarching document for this Business Rule is:
SESLHD Guideline, SELSHDGL/062 Pre-Operative/Procedural Fasting for Patients Undergoing Anaesthesia[9]

Change Summary

Month & Year: June 2023
Review type: New Document
☒ Evidence/Procedural change
☒ Identified risk (RCA, Critical Incident, Safety Alert, Complaint, Audit data, Performance data)
☐ New/Updated MoH or SESLHD overarching document
☐ Scheduled Review according to Risk Rating
☐ Required as National Standards
☒ N/A new document

Feedback about this document can be sent to SESLHD-POWHPolicy@health.nsw.gov.au

BUSINESS RULE

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TYPE OF BUSINESS RULE	Clinical or Corporate Business Rule
DATE OF RATIFICATION	7th June 2023
REVIEW DATE	June 2025
RISK RATING	High
NATIONAL STANDARD ALIGNMENT	Standard 1- Clinical Governance Standard 4 - Medication Safety Standard 8 - Recognising and Responding to Acute Deterioration
FUNCTIONAL GROUP/SUBGROUP	General Surgery
FORMER REFERENCE(S)	Nil
EXECUTIVE SPONSOR or EXECUTIVE CLINICAL SPONSOR	Director of Clinical Services
AUTHOR/CUSTODIAN	Anaesthetist - Prince of Wales Hospital
KEY TERMS	Fasting, NBM, Sip til Send, Preoperative Oral Fluids

1. PURPOSE & SCOPE

This business rule will provide clinicians across POWH and SSEH with guidance regarding fasting requirements of patients undergoing procedures that require procedural sedation or general anaesthesia, whether in operating theatres or other areas of the hospital. This includes both emergency and elective patients.
POWH & SSEH are implementing a process called “Sip til Send”. This business rule should be read in conjunction with the SESLHD Guideline, SELSHDGL/062 Pre-Operative/Procedural Fasting for Patients Undergoing Anaesthesia[9]

Individual patient circumstances and requirements should be considered by anaesthetic and procedural teams with pre-operative plans being made in conjunction with patients, families and carers.

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This guideline supports the Agency for Clinical Innovations 'Key Principles- Preoperative fasting in NSW public hospitals'.

Aboriginal Health Impact Statement
In consultation with the SESLHD Aboriginal Health Unit the health needs of Aboriginal people relating to this business rule have been considered. This business rule is deemed to not require a full Aboriginal Health Impact Statement as it does not directly affect the health needs of Aboriginal people.

2. KEY SAFETY POINTS

This guideline is **not intended** for use in non-procedural patients.

This guideline is **not intended** for use in those who are nil-by-mouth, requiring thickened fluids or are fluid restricted for other medical or surgical reasons. Seek advice from the treating team.

For the pre-operative fasting management of patients with Diabetes Mellitus (DM), please refer to:

- POWH/SSEH Business Rule, POWH/SSEH CLIN032 Surgery and Medical Procedures for Patients with Diabetes Mellitus[2]
- POWH Business Rule, POWH CLIN185 Insulin Infusion – For: Fasting for Surgery / treatment of Non-Diabetic Ketoacidosis (Non-DKA) / treatment of Non-Hyperglycaemic Hyperosmolar State (Non-HHS)[1]
- POWH Business Rule, POWH CLIN178 Insulin pump: Inpatient self-administration of insulin using a continuous subcutaneous insulin infusion pump
- SSEH Insulin Infusion for non-DKA/ non-HHS SSEH CLIN091
- If required consult with the Endocrine Team

SCH have their own Practice Guideline, Preoperative oral fluids - SCH[14]

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3. ROLES AND RESPONSIBILITIES

Role	Responsibilities
Anaesthetists	• Pre-operative assessment of patient's 'fitness' for surgery • Provision of clear and evidence-based instructions of fasting times to patients and nursing staff. • Prescription of insulin regimens for patients with diabetes, in consultation with endocrine, where appropriate. • Prescription of intravenous glucose infusions where appropriate • Escalation of clinical deterioration of fasting patients refer to POWH Business Rule POWH CLIN005 Management of Deteriorating Patient –Clinical Emergency Response System (CERS) [6] or SESLHDPR/705 - Management of the deteriorating MATERNITY woman[10] or SSEH Business Rule SSEH CLIN026 Clinical Emergency Response System (CERS) • Informing nursing staff if a patient is not appropriate for "Sip Til Send" and to document the alternative fasting plan. • Documenting medication plan on NIMC/eMeds and progress notes.
Surgeons	• Documenting clear and evidence-based instructions for provision of fasting times to patients and nursing staff. • Alerting anaesthetic and nursing staff of alterations in list order to provide patients with appropriate nourishment.
Registered and Enrolled Nurses	• Following instructions provided in this guideline for pre-operative patients. • Communicating with anaesthetists and surgeons in regards to fasting instructions for specific patients. • Escalation of clinical deterioration of fasting patients refer to POWH Business Rule POWH CLIN005 Management of Deteriorating Patient –Clinical Emergency Response System (CERS) [6] or SESLHDPR/705 - Management of the deteriorating MATERNITY woman[10] or SSEH Business Rule SSEH CLIN026 Clinical Emergency Response System (CERS) • Regular BGL monitoring of fasting patients with diabetes. • Provision of clinical handover to the procedural unit or operating theatre nurse including fasting time and BGL monitoring. • Ordering and providing appropriate fluids for pre-operative patients

	(as per local procedures) such as the Pre Operative Fluid Diet.

Training Requirements

Local training for staff working in surgical and procedural areas.

4. Pre-Procedure Fasting

Pre-operative and pre-procedural fasting is necessary for all patients undergoing procedural sedation or general anaesthesia to protect the patient from possible regurgitation and aspiration of gastric contents[14,15].

It is important that patients are not fasted for extended lengths of time before a surgical procedure as this will increase the: surgical stress response, catabolic state associated with starvation, insulin resistance, risk of hypoglycaemia in patients with diabetes and general discomfort. Patients who are fasted from preoperative oral fluids for extended periods also become dehydrated, making it difficult to gain IV access, increase the intraoperative fluid requirements and increase the risk of sodium overload. It also increases pre-operative thirst, hunger, anxiety and nausea.

Clinical patient outcomes are improved when preoperative clear fluids are continued until the patient is sent for theatre (compared to prolonged fasting) including (ACI 2016):

- Replacing/maintaining the body's water balance
- Easier peripheral cannulation
- Improved post-operative nausea and vomiting
- Improved patient comfort
- Enhanced post-operative recovery

Fasting audits have repeatedly shown that patients fast much longer than the recommended 2 hours. Recent evidence has questioned the need for a 2 hour fast, and several institutions have adopted policies that allow clear fluids until the patient is sent for [16,17,18]. Studies have also shown the multifactorial nature of aspiration of gastric contents and the rarity of events that lead to morbidity or death[19].

A pre-operative fluid diet does not provide adequate nutrients and should not be used as the sole source of nutritional support for longer than one (1) day.

4.1 Liquids / 'Sip Til Send'

Adult patients should be encouraged to sip Preoperative Oral Fluids at a rate of

200mLs per hour **up until the time they are sent for theatre.** Children should be encouraged to sip preoperative oral fluids at a rate of 3mLs per kg per hour **up until the time they are sent for theatre.** This is otherwise known as **"Sip Til Send".**

Exclusions, liaise with the treating team for requirements

- If there is a surgical or medical order for Nil By Mouth (NBM) or fluid restricted for a reason other than fasting for anaesthesia
- If the procedural anaesthetist documents otherwise in the eMR.
- If the patient does not want to drink
- Some patients having specific endoscopic procedures will need to avoid fluids that are red, blue or purple coloured.
- Patients with diabetes may require diet versions of preoperative diet fluids. If in doubt seek guidance based on blood sugar levels.
- Patients requiring sedation or anaesthesia for a PET scan can only have water for "Sip til Send" (glucose not allowed).

Preoperative Oral Fluids covered in this guideline **excludes** all liquids containing fat, protein and insoluble fibre. **Note:** Clear soups, thickened fluids and jelly that are included in a "clear fluid diet" are **NOT** suitable Preoperative Oral Fluids. See Table 1: Comparison of fluid diet specifications from ACI Frequently Asked Questions Preoperative Oral Fluid Diets Jan 2016[13].

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Diet – Pre-operative Oral table

Allowed	*Not Allowed*
Water Ice-cubes/chips Apple juice (clear, pulp free) Black tea or coffee Commercial rehydration or electrolyte drinks such as *Dex™, Hydralyte™ , Gastrolyte™ , SOS™, Poly-Joule™ or Carb Plus™* "Sports drinks" such as *Gatorade™ and Powerade™* Clear carbonated drinks (eg lemonade) Cordial Ice blocks/icypoles provided it is a clear fluid when in liquid form (ie you can see through it when held up to light) Sugar or artificial sweetener added to drink	Anything with protein, fat or fibre Thickened fluids Milk (cow, goat, almond, oat etc) Anything dairy – eg skim milk, formula, yoghurt, Yakult™, watered-down milk, vanilla flavoured milks, ice-cream Lollies and sweets, even if only "sucking" Starch or cornstarch Bone broth, beef-extract or beef-tea Jelly (contains gelatin – a protein) Any protein drinks Anything with fruit pulp or vegetable fibres – eg "real" or freshly pressed/crushed apple, coconut, pineapple or other fruit juices Any fluid that is "cloudy" Orange juice Coca cola Anything given to "help get medications down" – eg Nutella, peanut butter, bread, yoghurt – no matter how small Alcohol Whilst chewing gum is technically allowed up until theatre, it should not be encouraged due to the risk of it becoming an inhaled foreign body if the patient forgets or chooses not to disclose it to the anaesthetist.
NB: Patients with diabetes usually require diet versions of the above allowed clear fluids, but may require small amounts of carbohydrate-containing oral fluids to correct hypoglycaemia. This should be determined on a case-by-case basis following local protocols[2].	
NO FOOD PRODUCTS IN THE SIX (6) HOURS PRIOR TO INDUCTION OF ANAESTHESIA	

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Adapted from NSW Agency for Clinical innovation, Key Principles: Preoperative Fasting in NSW Public Hospitals[13]

4.2 Solids

All patients undergoing procedural sedation or general anaesthesia should fast from solids for **no less than six (6) hours before the induction of anaesthesia.**

4.3 Pre-Procedural Medication Administration

Medications should not be withheld purely for fasting purposes. Good pre-operative pain management is essential for patient wellbeing. Check the anaesthetist's and surgeon's instruction for individual medication plans.

Prescribed morning medications (including analgesia) should be administered with a sip of water at 0600 hrs unless otherwise stated (check anaesthetist's and surgeon's instructions).

Medications to be withheld/suspended should be clearly annotated on the medication chart (NIMC/eMeds).

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Exceptions:

This list is NOT exhaustive:
Intention to continue these medications should be confirmed with treating team and/or anaesthetist.

*

Contact the anaesthetist or medical team for clarification if required.

*

Anticoagulants
Antiplatelet Medications
Hypoglycaemic Agents
Lithium
Monoamine Oxidase Inhibitors
NSAIDs
Potassium Sparing Diuretics
Hormone Replacement Therapy
Oral Contraceptives

*

Patients undergoing vascular, neurosurgical or cardiac surgery may require the continuation of anticoagulation/antiplatelet medication. Seek clarification from Surgical/Anaesthetic Medical Officer.

*

Patients with cardiac stents should only have antiplatelet medications withheld with approval from a cardiologist.

All medications should be managed following:

- POWH Business Rule, POWH CLIN032 Medication management[4]
- SSEH Business Rule, SSEH CLIN050 Medication Management[7]
- SSEH Business Rule, SSEH CLIN051 Safe Medication Administration Procedures[8]
- SESLHD Guideline, SELSHDGL/062 Pre-Operative/Procedural Fasting for Patients Undergoing Anaesthesia[9]

4.4 Enteral Feeding

Patients with enteral tube feeding can continue feeding **until six (6) hours pre-procedure**; Suitable adult patients should have Preoperative Oral Fluids administered via tube at a rate up to 200mL per hour **up until the time they are sent for theatre.** Children should have preoperative oral fluids administered via tube at a rate up to 3mLs per kg per hour **up until the time they are sent for theatre**. Patients should then be nil-by-tube until the end of the procedure.

5. DEFINITIONS

BGL	Blood Glucose Level
BTF	Between the Flags (eMR2)
DM	Diabetes Mellitus
DPP4s	Dipeptidyl peptidase-4
GLP1 agonists	Glucagon-like peptide-1 agonists
HbA1C	Haemoglobin A1c
IV	Intravenous
NSAID	Non-steroidal anti-inflammatory drugs
Preoperative Oral Fluids Diet	A diet used for preparation of patients for procedures involving anaesthesia or sedation. Only fluids that are rapidly cleared from the stomach.
SC	Subcutaneous
SGLT2	Sodium-glucose co-transporter-2
Sip til Send	A term used to describe the continuation of Preoperative Oral Fluids Diet up until the time patients are sent to theatre.

6. DOCUMENTATION

Pre and Post Procedural Handover Form

- Last food time
- Last drink time
- Last BGL pre-procedure result.

Intravenous Fluid Therapy

- Intravenous Fluid Order - eMEDS.

BGL

- BTF (eMR2)/SAGO/iView
- Approved Insulin Infusion forms

- Approved Subcutaneous Insulin Management forms
- Pre and Post Procedural Handover form.

Subcutaneous Insulin Prescription
- Approved Subcutaneous Insulin Management forms
- Approved electronic medication management systems (e.g. eMEDs, eRIC).

Intravenous Insulin Infusion
- Approved Insulin Infusion forms
- Approved electronic medication management systems (e.g. eRIC).

Progress Notes
- Specific fasting instructions (for deviations from this guideline)
- CERS notifications.

Medication Chart
- Document medications to be withheld/suspended on eMeds/NIMC and review date post operatively.

7. COMPLIANCE

7.1 Knowledge Monitoring Questions

1. What are the risks to patients if prolonged fasting occurs?
2. How much oral fluid can be consumed per hour by fasting patients?
3. Where should all patient oral intake be documented?
4. Where will I find information about patients' medications to be administered during fasting?

7.2 Compliance Evaluation

Documentation audit 5 records / month
Initial post implementation audit of 200 patients to compare to previous fasting audits at POWH.
Reported at – Surgical Quality & Safety meeting, Anaesthetic Quality Assurance Meeting, RCOS and Surgical unit ward meetings Quarterly

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8. RELATED POLICIES/PROCEDURES/GUIDELINES/BUSINESS RULES

Number	Policy/Procedure/Guideline/Business Rule
1.	POWH Business Rule, September 2022. Insulin Infusion – For: Fasting for Surgery / treatment of Non-Diabetic Ketoacidosis (Non-DKA) / treatment of Non-Hyperglycaemic Hyperosmolar State (Non-HHS) (POWH CLIN185)
2.	POWH/SSEH Business Rule, January 2022. Surgery and Medical Procedures for Patients with Diabetes Mellitus (POWH/SSEH CLIN023)
3.	POWH Business Rule, December 2021. Insulin pump: Inpatient self-administration of insulin using a continuous subcutaneous insulin infusion pump (POWH CLIN178)
4.	POWH Business Rule, July 2021. Medication management (POWH CLIN023)
5.	POWH/SSEH Business Rule, August 2020. Hypoglycaemia Management for Patients with Diabetes (POWH/SSEH CLIN002)
6.	POWH Business Rule, Management of Deteriorating Patient – Clinical Emergency Response System (CERS) (POWH CLIN005)
7.	SSEH Business Rule, November 2021. Medication Management (SSEH CLIN050)
8.	SSEH Business Rule, July 2021. Safe Medication Administration Procedures (SSEH CLIN051)
9.	SESLHD Guideline, September 2021. Pre-Operative/Procedural Fasting for Patients Undergoing Anaesthesia (SELSHDGL/062)
10	SESLHD Procedure, June 2021. Management of the deteriorating MATERNITY woman (SESLHDPR/705))
11.	SSEH Business Rule SSEH CLIN026 Clinical Emergency Response System (CERS)
12.	SCH Practice Guideline, April 2023. Preoperative Oral Fluids - SCH

9. EXTERNAL REFERENCES

Number	Reference
13.	NSW Agency for Clinical Innovation (ACI), May 2016. *Key Principles: Preoperative fasting in NSW pubic hospitals*.
14.	Frykholm P, Disma N, Andersson H, et al; *Pre-operative fasting in children: A guideline from the European Society of Anaesthesiology and Intensive Care*, Eur J Anaesthesiol 2022; 39:4.

15.	Girish P Joshi, Basem B Abdelmalak, Wade A Weigel, Monica W Harbell, Catherine I Kuo, Sulpicio G Soriano, Paul A Stricker, Tommie Tipton, Mark D Grant, Anne M Marbella, Madhulika Agarkar, Jaime F Blanck, Karen B Domino; Anesthesiology, *American Society of Anesthesiologists Practice Guidelines for Preoperative Fasting: Carbohydrate-containing Clear Liquids with or without Protein, Chewing Gum, and Pediatric Fasting Duration-A Modular Update of the 2017 American Society of Anesthesiologists Practice Guidelines for Preoperative Fasting*, 2023 Feb 1;138(2):132-151. doi: 10.1097/ALN.0000000000004381
16.	Checketts M, 2023; Anaesthesia, *Fluid fasting before surgery: the ultimate example of medical sophistry?*, 2023, 78, 147-149. doi:10.1111/anae.15925.
17.	Ruggeberg A, Nickel E.A, Anaesthesia, *Unrestricted drinking before surgery: an iterative quality improvement study,* 2022, 77, 1386–1394
18.	Marsman, M et al. JAMA Surgery, *Association of a liberal fasting policy of clear fluids before surgery with fasting duration and patient well-being and safety*. 2023, 158(3), 254-263.
19.	Kluger, M.T, Culwick, M.D, Moore, M.R, Merry, A.F. Anaesthesia and Intensive Care, *Aspiration during anaesthesia in the first 4000 incidents reported to wedAIRS*. 2019, 47(5), 442-251.

10. REVISION & APPROVAL HISTORY

Date	Revision No.	Summary of changes, Author and Approval
May 2023	0	New document developed by Philip Black in consultation with RCOS, Anaesthetics, Program of surgery.
June 2023	0	Approved by POW/SSEH Policy and Procedure Review Committee for distribution. SESLHD QUM not requried.