

Oxytocin Infusion at Low Volume – Protocol

Purpose

To outline clinical situations where **low-volume oxytocin infusion** is required to minimise the risk of fluid overload, pulmonary oedema, or worsening renal impairment in women with complex medical or obstetric conditions.

Scope

This protocol applies to:

- Midwifery, obstetric, anaesthetic, and medical staff involved in the care of women receiving oxytocin infusions.
- Women receiving antenatal, intrapartum, or postpartum care where fluid restriction is clinically indicated.

It will be a clinical decision made by the obstetric team.

Indications for Low Volume Oxytocin Infusion

Low volume administration (e.g. concentrated infusion with controlled pump delivery) must be used for women who meet **any** of the following criteria:

1. Severe Pre-eclampsia/Eclampsia

Women with severe PET, particularly those receiving magnesium sulphate (MgSO₄) therapy.

2. Evidence of Significant Renal Impairment

- Protein: creatinine ratio (PCR) > 300 mg/mmol (nephrotic-range proteinuria)
- Creatinine > 90 µmol/L in the context of PET
- Urine output < 30 mL/hr in PET

3. Significant Oedema or Fluid Overload Risk

- Severe oedema: pitting oedema to above the knees
- Facial oedema, particularly periorbital swelling
- Rapidly increasing oedema
- Presence of intra-abdominal ascites beyond what would be expected in labour

4. Suspected or Confirmed Pulmonary Oedema

Any clinical signs or symptoms suggesting pulmonary oedema, including:

- Dyspnoea
- Orthopnoea
- Cough with frothy sputum
- Basal crepitations
- Reduced oxygen saturations
- Tachypnoea

5. Cardiac Disease

Women with:

- Congenital cardiac disease, OR
- Acquired cardiac disease, where postpartum fluid shifts place them at risk of postpartum pulmonary oedema

Rationale

These conditions increase the risk of:

- Fluid overload
- Pulmonary oedema
- Worsening renal impairment
- Cardiac decompensation

A low volume oxytocin infusion reduces unnecessary fluid load while safely maintaining uterotonic effect.

Administration volume

The usual low volume dose will be Oxytocin 40 units in 100ml N/Saline to be administered at 25ml/hr via pump