

# Oxytocin protocol

Clinical Guideline Presentation v2



30 minutes

Towards CPD Hours

## References:

Queensland Clinical Guidelines: *Induction of labour* and *Primary postpartum haemorrhage* are the primary reference for this package.

## Recommended citation:

Queensland Clinical Guidelines. Oxytocin protocol: clinical guideline education presentation E24.1-2-V2-R29. Queensland Health. 2024.

## Disclaimer:

This presentation is an implementation tool and should be used in conjunction with the published guideline. This information does not supersede or replace the guideline. Consult the guideline for further information and references.

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# Purpose

- Detail the standardised oxytocin infusion dosing protocol for Queensland Clinical Guidelines:
  - *Induction of labour*
  - *Primary postpartum haemorrhage*

# Benefits of standardised dosing protocol



- Improve medication safety
- Consistency across hospitals and health services
- Simplified administration calculation
- Infusion device guard rail management
- Improved response time when PPH follows IOL (same bag can be used)

# Oxytocin dosing protocol



Add oxytocin 30 international units (IU) to either 500 mL sodium chloride 0.9% or Hartmann's solution

**for IOL or PPH**

**Practice tips:** *for oxytocin 30 IU in 500 mL*

- Must be administered via an infusion device
- 5–10 IU per hour is equivalent to 83–167 mL per hour
- Volume in mL per hour is the same as milliunits per minute (i.e. 1 mL/hr = 1 milliunit/minute)

# Calculations

1 international unit (IU) = 1,000 milliunits

10 international units (IU) = 10,000 milliunits

30 international units (IU) = 30,000 milliunits

## Standard Oxytocin order

Oxytocin 30 IU in 500 mL of solution = oxytocin 30,000 milliunits in 500 mL  
= oxytocin 60 milliunits per mL

## Worked Example:

Infuse 10 IU per hour of a 30 IU in 500 mL oxytocin solution.  
How many mL per hour is that?

*Strength required* =  $\frac{10 \text{ IU (10,000 milliunits)}}{30 \text{ IU (30,000 milliunits)}}$  x volume 500 mL

*Strength in stock* = 30 IU (30,000 milliunits)

$10,000 \div 30,000 \times 500 = 167 \text{ mL per hour}$

# Scenario

Hang had a normal vaginal birth after IOL for prolonged pregnancy. Third stage is complete. You note that she is bleeding heavily and estimate a blood loss of 600 mL. An oxytocin infusion for management of PPH is ordered. There is 400 mL of the IOL oxytocin infusion (30 IU in 500 mL) remaining.

## Can you continue with the current infusion of oxytocin?

- Yes. The same infusion can be restarted/increased to 10 IU per hour (167 mL per hour)
  - If oxytocin 5 IU per hour is ordered, increase the infusion rate to 83 mL per hour
- Inconsistent evidence to support a minimum oxytocin infusion duration
  - 2–4 hours is most common
- Once complete, use clinical judgement to assess the need for an additional infusion
  - Contraction of uterus, volume & rate of ongoing bleeding



# Considerations



## Is a separate medication order required for the PPH oxytocin infusion?

- Yes. If you have used the original/IOL oxytocin infusion, the order requires amendment to indicate the increased infusion rate (5–10 IU per hour) *or*
- If a new infusion is prepared, a new order is required

## How is the oxytocin infusion documented?

- As per local protocol
- During IOL, record the oxytocin infusion as milliunits per minute (corresponds to mL/hour)
- For PPH, record the oxytocin infusion as either IU per hour or mL per hour