

# Oxytocin infusion: updated protocol 2017



**30 minutes**

Towards CPD Hours

## References:

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

## Recommended citation:

Queensland Clinical Guidelines. Oxytocin protocol update: clinical guideline education presentation E17.1.2-V1-R17 Queensland Health. 2017.

## Disclaimer:

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

## Feedback and contact details:

**M:** GPO Box 48 Brisbane QLD 4001 | **E:** [guidelines@health.qld.gov.au](mailto:guidelines@health.qld.gov.au) | **URL:** [www.health.qld.gov.au/gcg](http://www.health.qld.gov.au/gcg)

## Funding:

Queensland Clinical Guidelines is supported by the Healthcare Improvement Unit, Queensland Health.

## Copyright:

© State of Queensland (Queensland Health) 2017



This work is licensed under a Creative Commons Attribution Non-Commercial No Derivatives 3.0 Australia licence. In essence, you are free to copy and communicate the work in its current form for non-commercial purposes, as long as you attribute the Queensland Clinical Guidelines Program, Queensland Health and abide by the licence terms. You may not alter or adapt the work in any way. To view a copy of this licence, visit <http://creativecommons.org/licenses/by-nc-nd/3.0/au/deed.en>

For further information contact Queensland Clinical Guidelines, RBWH Post Office, Herston Qld 4029, email [guidelines@health.qld.gov.au](mailto:guidelines@health.qld.gov.au), phone (+61) 07 3131 6777. For permissions beyond the scope of this licence contact: Intellectual Property Officer, Queensland Health, GPO Box 48, Brisbane Qld 4001, email [ip\\_officer@health.qld.gov.au](mailto:ip_officer@health.qld.gov.au), phone (07) 3234 1479.

Images are property of State of Queensland (Queensland Health) unless otherwise cited.

# Purpose

- Highlight changes to the oxytocin infusion protocol in the Queensland Clinical Guidelines:
  - *Induction of labour*
  - *Primary postpartum haemorrhage*
- Assist the identification of local implementation activities related to the change in protocol

# Why the change?

Differing protocols are in use across QLD

- **Previous IOL guideline:**
  - 10 IU in 500 mL
  - 20 IU in 1000 mL
  - 30 IU in 500 mL
- **Previous PPH guideline:**
  - 40 IU in 1000 mL

# New oxytocin protocol



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

**for IOL or PPH**

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

- 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

# Benefits of standardising

- Improve medication safety
  - Less confusion for staff working across/between facilities and HHS
  - Simplified administration calculation
- Improve response time when PPH follows IOL (same bag can be used)



# Implementation suggestions

- Staff education (midwives, obstetricians, anaesthetists, theatre staff.....)
- Infusion device guard rail management
- Local protocol updates
- Refer to the [QCG implementation checklist](#)



# Calculations

One international unit (IU) = 1000 milliunits

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

30,000 milliunits in 500 mL = 60 milliunits per mL

## Formula:

mL per hour = desired milliunits per hour divided by 60 milliunits per mL

## Worked Example:

Infuse 5 IU per hour of a 30 IU in 500 mL oxytocin solution.  
How many mL per hour is that?

*Remember:* 5 IU = 5000 milliunits

$$5000 \div 60 = 83 \text{ mL per hour}$$



# Scenario

Hang Nguyen had a normal vaginal birth after IOL for prolonged pregnancy. Third stage is complete. You note that she is bleeding quite heavily and estimate a blood loss of 600 mL. An oxytocin infusion for PPH is ordered. There is 300 mL of oxytocin left in the oxytocin infusion (30 IU in 500 mL) used during Hang's IOL.

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

Yes. Increase the infusion rate to 83 mL per hour. This will administer oxytocin 5 IU per hour.

If oxytocin 10 IU per hour is required, increase the rate to 167 mL per hour.

## How will you document the dose?

- During IOL, record the oxytocin infusion as milliunits per minute
- For PPH, record the oxytocin infusion as IU per hour



# Scenario

After 3 hours at 83 mL per hour, Hang's bag of oxytocin is nearly empty.

**Do you need to make up another bag so that Hang receives 4 hours of oxytocin infusion?**

Use clinical judgement to assess the need (e.g. contraction of the uterus, volume of ongoing blood loss).

There is no evidence for a minimum duration of oxytocin infusion, although 4 hours is common in clinical practice.

If bleeding has settled a further bag of solution may not be required.

If there is continued bleeding, a new bag can be prepared.

**Do you need a separate order for the PPH oxytocin infusion, even though you used the same bag from the IOL order?**

An order is needed to indicate the increased infusion rate (5–10 IU per hour).

If a new bag is prepared, a new order is needed.

