GIG CYMRU NHS WALES | Bwrdd Iechyd Prifysgol Caerdydd a'r Fro | Cardiff and Vale University Health Board

# Water in Labour and Birth - Midwifery Guidelines for the use of

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| Reference Number: UHBOBS388<br>Version Number: 3 | Date of Next Review: 19/1/2027<br>Previous Trust/LHB Reference Number: |

Water in labour and birth

Introduction and Aim

This guideline is to aid clinical practice in the use of water for labour and birth on both the Midwife led and Consultant led units.

Objectives

- Supporting women in making decisions about their intrapartum care.
- Guidance to facilitate standards of care for the use of water
- Risk assess women with pre-existing medical conditions for the use of water
- Individualised care plans.

Scope

This guideline applies to pregnant women, their families and carer, Obstetricians, Midwives, anaesthetists and all other healthcare professionals caring for women in labour.
It had been generated for Local use using information from:

- NICE 2021 Intrapartum Care for Healthy women and babies
- NICE 2019 Intrapartum Care for Women with existing Medical Conditions
- All Wales Midwife led guidelines 2022

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| Documents to read alongside this Procedure | • Low risk Intrapartum Care<br>• Intrapartum fetal monitoring |
| Approved by | Committee/Group. MPF |

| Version Number | Date of Review | Reviewer Name | Date Approved | New Review Date |
|---|---|---|---|---|
| 1 | August 2010 | J Sanders | August 2010 | August 2013 |
| 2 | July2013 | A Holmes | Sept 2013 | Sept 2016 |
| 3 | January 2024 | Sarah James and MLU team | 19/1/2024 | 19/1/2027 |

## Disclaimer

**When using this document please ensure that the version is the most up to date by checking the Obstetrics & Gynaecology Guidelines on the UHB Clinical Portal.**

# Contents

# Water in Labour and Birth

' The words "woman" and "women" have been used throughout this document as this is the way that the majority of those who are pregnant and having a baby will identify. For the purpose of this document, this term also includes girls. It also includes people whose gender identity does not correspond with their birth sex or who may have a non-binary identity'

## 1. Introduction

Water can provide a calming environment for women. Once in active labour, water can enhance uterine activity, provide effective pain relief (thereby reducing the need for pharmacological analgesia). There is some evidence to suggest that the length of the first stage may be reduced.

Water immersion during labour is not associated with reduced five minute APGAR scores, increased neonatal infection rates or admission to neonatal unit.

## 2. Aim

To provide the best available evidence to facilitate the safe and effective use of water immersion during labour and birth.

It must be noted that there is currently limited evidence available relating to the use of water during labour and birth, therefore aspects of the guideline have been based on advice published by midwives who have become experts in the use of supporting women using water for labour and birth.

## 3. Current evidence

Current evidence around the use of water immersion during labour and birth suggests:

Randomised controlled trials :

- Reduced need for pharmacological analgesia
- Reduced chance of requiring augmentation during 1st stage of labour

Non-randomised studies :

- More intact perineums in nulliparous women
- Fewer episiotomies
- Overall incidence of less 3rd and 4th degree tears
- Shorter overall labour

Qualitative studies

- Women report better birth experiences
- Women report a greater sense of control

A recent Cochrane systematic review reported no significant differences in adverse maternal/neonatal outcomes when comparing labours in and out of water.

NICE suggest all healthy women with uncomplicated pregnancies should be offered water immersion for analgesia during labour. Many women with complexities will also be suitable to use water immersion for labour and/or birth.

## 4. Criteria for women

All women who wish to use the pool for labour and/or birth should be assessed for their suitability. Documentation of all discussions are essential.

Midwives should provide instruction to women on safe entry into and exit from the birth pool in line with manufacturer's recommendations. This is to enable safe, independent access and egress from the birthing pool.

### 4.1 Midwife-led pathway

Water birth is suitable for healthy women with uncomplicated pregnancies and labour (as defined by the All Wales Midwifery-Led Care Guidelines and The All Wales Clinical Pathway for Normal Labour (AWCPNL)

- Uncomplicated obstetric history
- No medical history that affects birth
- Current pregnancy uncomplicated or individualised plan made
- Cephalic presentation
- 37-42 weeks gestation
- Spontaneous onset of labour or MLC IOL pathway
- SROM > 37/40 <24 hours prior to onset of active labour
- BMI <35 for nulliparous women  BMI <40 for multiparous women with previous uncomplicated vaginal birth

All women following the AWCPNL should be supported to labour and give birth in water.

It is recommended that women do not enter the water pool within 2-4 hours of receiving opioids, or if feeling drowsy or affected by them after this period. There is a need to consider the risk of respiratory and reflex depression in a baby where the mother has received opioids in the last few hours.

Water may be used whenever desired for pain relief. There is insufficient evidence on timing of immersion into water in the first stage of labour and therefore there should be no restriction on when women enter the pool.

The woman may choose to leave the pool at any time

The woman should understand that she will be requested to leave the pool should any complication or concern arise.

The woman should be asked to leave the pool if appropriate fetal monitoring cannot be undertaken.

Document the time of entry and exit of the pool in the maternal labour records.

### 4.2 Consultant-led pathway

Increasingly, women who are following a Consultant-led pathway and who are recommended to birth on a labour ward wish to use the water pool.

There is the availability of a birthing pool facility on both the Midwife led and Obstetric led birthing units.

Prior to the woman being offered the use of the birthing pool on labour ward, consideration should be given to the plan of care and requirements of the individual woman and/or baby having reviewed the full antenatal history and clinical assessment on admission to labour ward.

SEE PAGE APPENdix FOR CRITERIA AND RECOMMENDATION FOR FETAL MONITORING

## 5. Care in labour

5.1 1st stage of labour

Run the water (for several minutes) before filling the pool. The water should be deep enough to cover the woman's abdomen and to nipple level when sitting. Insufficient water levels will not create buoyancy which is thought necessary to trigger the release of endorphins and oxytocin and reduce the production of stress hormones. Deep water also provides support for the body and aids mobility.

Baseline observations must be within normal the parameters before entering the pool.

Maternal and fetal well-being must be monitored as outlined in the All Wales Clinical Pathway for Normal Labour, and documented on the partogram, with additional hourly maternal temperature monitoring as per NICE Guidelines (CG 190, 2022). Water temperature is to be recorded hourly and should be adjusted to the woman's comfort, however it must not exceed 37.5oC to avoid maternal hyperthermia.

Women should be encouraged to drink fluids or still isotonic drinks. Consideration should be given to excessive hydration which may affect oxytocin levels and in rare

cases lead to hyponatremia. The woman should be encouraged to pass urine regularly. Fluid balance chart should be maintained and local Hyponatraemia guidance followed wisdom.nhs.wales/health-board-guidelines/c-vmintrapartumfile/guideline-for-the-prevention-diagnosis-and-management-of-hyponatraemia-in-labour-and-the-immediate-postpartum-period/

Entonox may be used if the woman wishes whilst she is in the pool.

A woman should not be left alone in the pool.

Partners can be in the pool with the woman so long as trunks/costume is worn, and they are willing to leave the pool if asked/necessary.

If there is a rise in maternal temperature greater than 1oC or an increase to between 37.5oC – 37.9oC:
- The pool temperature must be lowered, and the room cooled.
- Increase oral fluids.
- Consider administering Paracetamol.
- Ensure that the maternal pulse and fetal heart rate is not raised.
- Repeat temp in 30 minutes and if still raised leave the pool.
- Repeat again in 30 minutes and if continues to be raised, discuss with the woman the recommendation for transfer to an obstetric unit.

If maternal temperature, maternal pulse, and fetal heart rate rise the woman should leave the pool immediately and follow AWCPNL guidelines and recommend transfer to an obstetric unit. In cases of a maternal temperature of greater than 38oC, the woman should be advised to exit the pool and be advised to transfer to an obstetric unit for review.

If contractions become irregular or slow progress in labour is confirmed on vaginal examination, the woman should be advised to leave the pool to mobilise and adopt a more upright position. If contractions increase and labour progresses the woman can return to the pool.

Women should be advised to leave the pool in the presence of any maternal or fetal concerns.

**5.2 2nd stage of labour**

During the 2nd stage of labour, the pool temperature should be between 37-37.5oC

To avoid fetal stimulation a ‘hands off’ technique must be used. The baby should be born spontaneously with little intervention (avoiding directed pushing, control of the head or “guarding the perineum”).

A mirror can be used to enhance visibility of advancing fetal head for the mother.

There is no need to feel for an umbilical cord.

The baby should be born entirely under the water and brought gently and slowly. If the woman raises herself out of the water and the fetal head is exposed the delivery should continue out of the water. Ensure the baby's body is immersed and 'skin to skin' commenced to maintain baby's temperature.

Check that the umbilical cord is intact. If it has snapped or torn it must be clamped immediately. Midwives should be aware of hidden cord rupture and have appropriate equipment (cord clamp) easily accessible. If it has snapped or torn it must be clamped immediately.

Babies born underwater often do not cry immediately and may remain blue-tinged for a longer period compared to those born out of water. The heart rate must be checked, and spontaneous respiratory effort observed. The cord should not be clamped earlier than 1 minute after the birth unless there is concern about the integrity of the cord or the baby's well-being.

### 5.3 3rd stage of labour

More research is needed regarding management of 3rd stage in the pool, although there is no evidence regarding benefits or risk associated with experiencing 3rd stage of labour in water. There have been no studies comparing management of 3rd stage in or out of water. In some areas it is common practice to complete 3rd stage in water, and there have been no known occurrences of water embolism from managing the 3rd stage in a pool.

Physiological third stage can occur in or out of the pool. If there is a delay in the third stage, the woman should be asked to exit the pool.

Active management can be conducted in the pool or out of the pool depending on the woman's wishes. However, the mother's leg should be lifted out of the water prior to administering intramuscular oxytocic injection.

In the event of a delay in 3rd stage, excessive bleeding, or concerns around the wellbeing of the woman indicating potential compromise; the woman should be encouraged to leave the pool.

Examination of the perineum should be conducted out of the pool and unless perineal trauma is assessed as severe, or bleeding profusely, any suturing required should be delayed for 1 hour following birth as perineal tissue may be water-logged and friable.

## 6. Measuring blood loss

It is not possible to measure blood loss in the pool, therefore blood loss will need to be estimated. Once the woman exits the pool, blood loss can be measured. If there is concern about the blood loss in the pool the woman should be supported to exit.

## 7. Emergencies

In the event of an emergency, immediate assistance should be requested, and the woman must promptly be assisted to vacate the pool and the appropriate emergency procedure followed by pulling the emergency buzzer to summon help or ringing 2222 to summon the obstetric emergency team or neonatal team as required.

In the event of shoulder dystocia, immediate assistance should be requested, and the woman should be encouraged to change position in the water (to all fours or deep squat). If birth is not achieved with the next contraction and manoeuvres are required, the woman should exit the pool immediately.

The woman should be supported by a midwife/staff member when leaving the pool, and another midwife should be prepared to support the fetal head.

In the event of maternal collapse in the pool or if the woman is unable to vacate the pool herself, immediate assistance should be requested (Appendix 2), and the agreed Safe System of Work for Evacuation from birthing pool must be promptly adhered to (see Appendix 2).

## Appendix 1 Use of the Birthing Pool on the Consultant Led Unit

| Prerequisites for pool in MLU | Can use pool on CLU | May use the pool with telemetry monitor | May use pool for labour on CLU but should not to birth | Should not use pool in any location |
|---|---|---|---|---|
| • Healthy woman, without medical problems which may negatively impact on her labour or baby's wellbeing.<br>• Good mobility enabling entry to and exit from the pool with minimal assistance.<br>• BMI less than 35 at booking.<br>• Uncomplicated pregnancy.<br>• Maternal observations within normal limits.<br>• Fetal heart rate normal on auscultation.<br>• Gestation 37 – 42+0 weeks.<br>• Normally grown baby with a cephalic presentation<br>• Singleton pregnancy<br>• Engaged head i.e. less than 4/5 palpable per abdomen<br>• <24 hours since SROM<br>• Insignificant meconium stained liquor<br>• Previous 3rd degree tear (antenatal discussion should have occurred regarding birth in the pool)<br>• Any maternal age<br>• Women who have been assessed and have individualised intrapartum plans following review by Consultant midwife / Birth Choices clinic. | • Women who with an increased risk of VTE.<br>• Women who have low platelets (less than 50).<br>• Thyroid disease requiring neonatal follow up.<br>• Jehovah's witness<br>• Asthma indicating CLU birth<br>• Previous 3rd degree tear<br>• CLC for maternal choice<br>• Increased maternal age<br>• Hep B/ Hep C positive women<br>• Insignificant meconium stained liquor<br>• Known GBS carrier<br>• Pain management during the latent phase of labour or induction of labour.<br>• Women may use the pool with Propess in situ. May enter the pool >1 hour after Prostin insertion. | • VBAC<br>• BMI >35 (once mobility for entry and exit of the pool has been assessed)<br>• Women in labour after IOL (not requiring IV Syntocinon)<br>• Gestation >42 weeks<br>• Significant meconium stained liquor with normal CTG<br>• Maternal choice for continuous fetal monitoring<br>• Women who have been assessed and have individualised intrapartum plans following review by Consultant midwife / Birth Choices clinic.<br>• Reduced AFI | • Risk of postpartum haemorrhage (PPH)<br>• Previous history of shoulder dystocia<br>• Babies requiring immediate paediatric review at birth<br>• Fetal size estimated to be >97th centile | • Major medical disease requiring intensive maternal monitoring e.g. cardiac disease, diabetes or posing risk of seizure or collapse.<br>• Pregnancy complications posing risk of seizure or collapse e.g. current APH, PET<br>• Significantly compromised mobility<br>• BMI 40 or greater<br>• Maternal pyrexia (37.5 on two occasions or 38 once) and or evidence of active infection<br>• Active herpes<br>• Gestation less than 37 weeks<br>• Less than 2hrs have elapsed since administration of an opiate such as Pethidine, or if the woman is still drowsy<br>• Placenta Praevia<br>• Breech presentation<br>• Significant polyhydramnios<br>• Non-engaged head<br>• Multiple Pregnancy |

## Appendix 2 EVACUATION FROM THE BIRTHING POOL

**The method described is intended to be used in an emergency when the life of the mother or baby is at risk and the woman unable to leave the pool herself.**

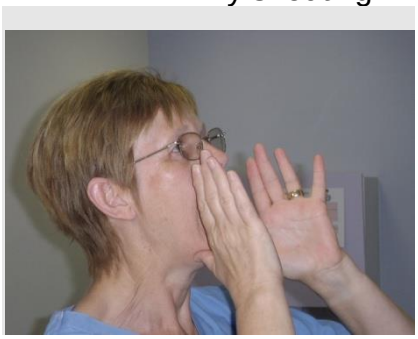
Any partner left on their own with a mother should know how to summon help either by pressing the emergency call button or by shouting. When no member of staff is present the door to the room should be left open with the curtain pulled across to provide privacy.

**In an emergency the following method is to be used;**

### 1. Summon help;

Pull red emergency call button

By shouting



### 2. Do not pull the plug out

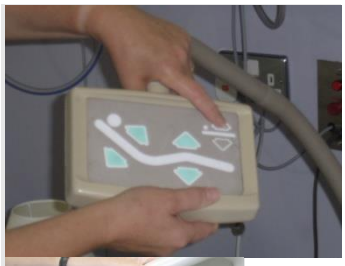
### 3. Support mother's head clear of the water using both hands. (Staff A)

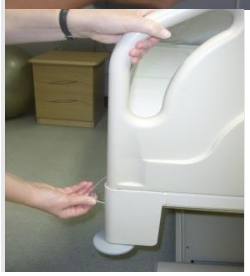
**N.B. The person who supports the head continues to do this until the mother is on the point of leaving the pool. (See step 10)**

**4. As help arrives in the room send a member of staff to dial 2222 and request the obstetric emergency team.**

**5. A member of staff (Staff B) enters the pool and the mother is manoeuvred to the end of the pool where the 2 handles are located.**

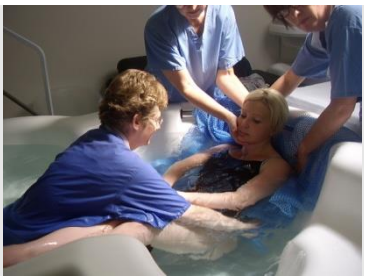
**6. Raise the bed to a working height and remove the foot board. (Midwife / MCA C)**



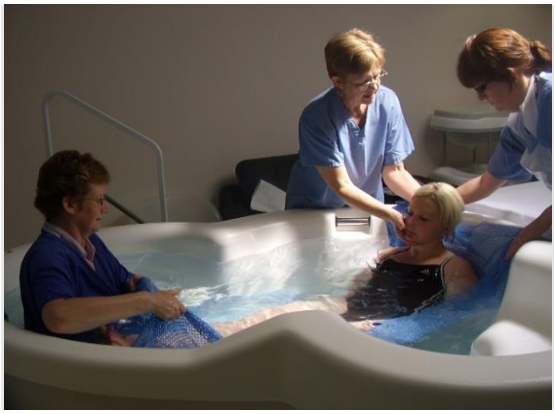


**7. Unplug the bed, unlock, and position at right angles to the pool, by the pool handles. Lock castors. (Staff C)**

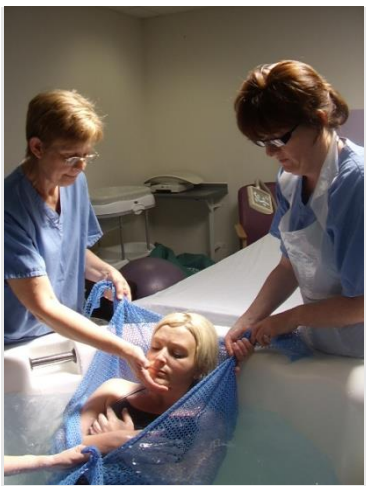
**8. Take the Birthing Pool Net from the wall unit and place under the woman, feeding it down behind her head, shoulders, bottom to feet. (Staff B and C). The top and bottom edges of the net are red.**



**9. Staff B ensures the mother is securely enveloped within the net and takes a firm hold supporting the mother's lower body.**

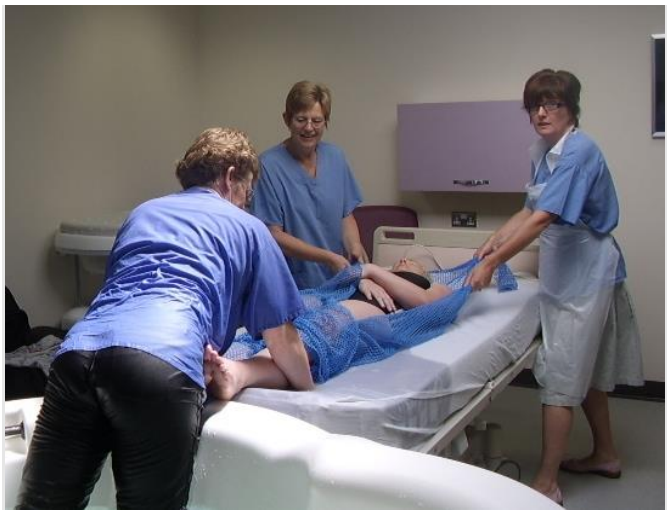


**10. Staff C takes a firm hold on the corner of the net nearest her, taking up the tension, and supporting the mother's head. This will allow Staff A to release her hold on the mother's head and take a firm hold on her top corner of the net.**



**11. Nurse A gives the command "Ready" Steady" "Lift" and the mother is pulled from the water onto the edge of the pool, upper body resting on the bed**

**12. Staff A gives further commands, "Ready" "Steady" "Move", until the mother is positioned completely on the bed.**



## Appendix 3. Procedure for pool cleaning

1. Following a labour/birth in the pool, ensure all debris is removed with a sieve BEFORE emptying the water - sieve to be disposed of after single use.

2. Clean the pool with ACHTICLOR (x1 tablet to x1 litre H20 using the washing bucket and mop, then rinse thouroughly - mop to be disposed of after single use, not left to soak in Milton).

3. Thoroughly clean with ACHTICLOR PLUS (dissolve x10 Achticlor tablets to x1 litre of cold H20, using Achticlor bucket and mop)

4. Rinse out thoroughly several times with hot running water, using shower spray and jug.

5. Before using the pool again, let the water run for a few minutes before filling.

6. Ensure "Flushing regime" performed x3 per week for approx 2 minutes - sign chart as appropriate.

ML/ES Lead Midwives MLU

MA Lead Nurse for Infection Control

May 2015