NHS
Manchester University
NHS Foundation Trust

DOCUMENT CONTROL PAGE

Title:	Birthing Pool for Labour and Birth guideline
Version:	2.1
Supersedes:	Version 2
Application:	All Staff

Originated / Modified By:	Kylie Watson / Lisa Dennison / Emma Collins / Helen Beeston / Farhana Faruque / Amanda Fieldhouse
Designation:	Consultant Midwife/Community Matrons / Birth Centre ward manager
Ratified by:	Site Obstetric Quality and Safety Committee
Date of Ratification:	12th October 2022

Issue / Circulation Date:	21/10/2022
Circulated by:	Clinical Governance Team Maternity
Dissemination and Implementation:	Clinical Governance Team Maternity
Date placed on the Intranet:	21/10/2022

Planned Review Date:	31st October 2025
Responsibility of:	Clinical Governance Team Maternity

Minor Amendment (If applicable) Notified To:	Section 2.12.3 replaced by appendix 2 detailing how to clean the birthing room and birthing pool after use.
Date notified:	13th September 2023

EqIA Registration Number:	2019-267R

Table of Contents

1 Introduction

The National Institute for Health and Clinical Excellence recommends that healthy women at low risk of complications should be offered the opportunity to labour in water for pain relief (NICE, 2014). A review of 15 trials including 3663 women found that water immersion during labour may reduce the number of women having an epidural and that giving birth in water did not appear to affect the mode of birth (Cluett et al, 2018). The review found no evidence that water immersion during labour increased the risk of an adverse outcome for women or their newborns. Immersion in water provides a number of benefits for women including relaxation

(Benfield et al., 2010; Ulfsdottir et al., 2018), reduced likelihood of intervention (Burns et al., 2012; Henderson et al., 2014), increased breastfeeding initiation and higher maternal satisfaction (Lathrop et al., 2018).

Women considering using the birthing pool should be offered the opportunity to discuss this option antenatally. Clear and balanced information should be provided in order for her to make an informed choice. Before entering the water, the woman should be made aware that she can choose to leave the pool at any time and that if there are any concerns about maternal or fetal well-being at any stage, she will be advised to leave the pool.

2 Detail of the Guideline

2.1 Inclusion Criteria

2.1.1 Assess suitability for using the birth pool at the onset of labour in line with inclusion and exclusion criteria outlined in Appendix 1.

2.1.2 For those requesting the use of the pool antenatally who do not meet the inclusion criteria

- Discuss with a team leader/senior midwife/consultant midwife
- Inform/discuss with the named Consultant Obstetrician
- An individual plan of care should be made and documented
- Consider using the pool for labour but not for birth to ensure choice and options for analgesia.

2.1.3 If other risk factors present, outside of the prerequisite and inclusion criteria, and a request made to use the birthing pool *on admission in labour to the delivery units*, and there is no documented plan of care, this should be discussed with the consultant on-call regarding the suitability of labouring and delivering in water.

2.2 Other Considerations

2.2.1 Time of entry into the pool

There is limited evidence to show any difference in timing of entry into the water (Cluett et al., 2018). If labour appears to be slowing within the first hour of entry into the pool, then encourage considering leaving the pool and to mobilise until labour

is established (Garland, 2011). Use of a bath or shower in early labour can be offered as alternatives.

2.2.2 Induction of labour

Those who are low risk and who have been admitted for induction of labour can enter the pool as soon as they meet the inclusion criteria (*Appendix 1*).

2.2.3 The use of telemetry in the pool

Use of the birthing pool when requiring continuous electronic fetal monitoring will depend on;

- The availability of the birth pool on the obstetric-led delivery units
- The availability of telemetry equipment that is suitable for immersion in water
- Whether the inclusion criteria outlined in *appendix 1* is met.
- Whether adequate recording of the fetal heart is achieved in the water

2.2.4 Intravenous antibiotics

Intravenous antibiotics required during labour can be administered out of the pool and the cannula must be covered with a waterproof dressing if available; advise to keep the cannula out of the water.

A positive Group B Streptococcus result should not prevent the use of the birthing pool for labour and birth in the absence of other risk factors (see *Prevention of Early Onset Group B Streptococcus Disease in the Neonate* guideline).

2.2.5 Pharmacological Analgesia

Nitrous Oxide (Entonox®) can be used as analgesia whilst in the birthing pool. The woman will need to leave the pool if opiates or an epidural is required. The birthing pool must not be used for a minimum of 2 hours after opiates have been administered and until there is no drowsiness.

2.3 Equipment

Prepare and check the room as for all births. Ensure that the room is warm and a comfortable temperature for the woman and birth partner. Additional equipment includes:

- Aqua sonic aid
- bath thermometer
- additional towels
- gauntlets/gloves
- mirror
- disposable sieve or disposable bowl
- net for emergency evacuation
- a fully functioning hoist (whose batteries are charged if this is required to operate the hoist)

For those having a homebirth and wish to use a birthing pool, they and/or their birth partner(s) are responsible for the assembly, filling and dismantling of the birthing pool.

2.4 Safety

Whilst in labour, or following the birth, women must always be accompanied whilst in the pool, by either their birth partner or a health professional. The location of call bells should be shown.

2.5 First stage of labour

2.5.1 All care in the first stage of labour, including frequency of maternal and fetal observations should be undertaken according to the *Care in Labour* guideline and *Fetal Monitoring in Labour* guideline. In addition, the frequency of recording the maternal temperature must be increased to hourly while the woman remains in the pool. If the woman's temperature either increases to 37.5°C or above, or 1 degree above her baseline temperature (upon entering the pool), she must be advised to leave the pool, as fetal hyperthermia and hypoxia could develop.

There is no good evidence for timing of entry into the birthing pool. Contractions should be regular and painful. If contractions become irregular then the woman may need to mobilise out of the pool for a time.

2.5.2 The water should be at a comfortable temperature in labour but not exceed 37.5°C (NICE 2014) or below 36°C. The temperature of the water must be checked hourly after adding hot water and documented.

2.5.3 The depth of the water should be level with the xiphisternum when in the sitting position. This aids buoyancy and allows free movement, aiding the progress of labour (Garland, 2011).

2.5.4 Vaginal examinations may be conducted whilst the woman is in the pool. Midwives must self-assess their own manual handling risks when undertaking a vaginal examination in the pool. If the assessment is difficult or findings are uncertain, the woman should be asked to leave the pool before repeating the examination.

2.5.5 See *Care in Labour* guideline for advice about hydration, frequency of micturition, and nutrition in labour. Good oral hydration should be maintained whilst in the pool.

2.5.6 Any debris should be removed from the pool; if the pool is heavily contaminated the pool must be emptied and refilled.

2.6 Second stage of labour

2.6.1 All care in the second stage of labour, including frequency of maternal and fetal observations should be undertaken according to the *Care in Labour* guideline and *Fetal Monitoring in Labour* guideline.

2.6.2 The temperature of the water should be checked and recorded in the maternal records hourly and after adding hot water. Aim for a water temperature between 36.5 and 37.5°C

for birth**. If the woman's temperature either increases to 37.5°C or above, or 1 degree above her baseline temperature (upon entering the pool), she must be advised to leave the pool, as fetal hyperthermia and hypoxia could develop.**

2.6.3 Management of the perineum in the pool is a 'hands off' approach. Women with a previous 3rd of 4th degree tear who wish to use the birthing pool should be advised to leave the pool in the second stage so that the perineum can be cared for using appropriate management techniques (such as that described in the OASI care bundle).

2.6.4 If an episiotomy is required, advise to leave the pool.

2.6.5 If the fetal head is exposed to air once the presenting part is visible, advise to remain out of the water to avoid the risk of premature gasping under water (RCOG/RCM 2006)

2.6.6 The baby should be born fully immersed under the water with no air contact to prevent stimulation of respiration.

2.6.7 The baby should be gently raised to the surface of the water immediately after birth of the body with the baby's head emerging first, prior to the first breath, to prevent aspiration of water.

2.6.8 The cord must never be clamped and cut whilst the baby's head is immersed as this will stimulate the baby and cause it to breathe.

2.6.9 If the cord is tight around the baby's neck and there is delay in the birth, the woman should be asked to stand clear of the water.

2.6.10 Following the birth, encourage skin-to-skin contact, with the baby's head remaining out of the water and the baby's body remaining submerged in the water to maintain warmth. The head and face may be dried with a warm towel.

2.6.11 Once the baby's head is out of the water, advise that it must not be submerged again.

2.7 Shoulder dystocia (See also the *Shoulder Dystocia Guideline*.)

- Once the head is born, note the time and await the next contraction. Encourage the woman to push and the midwife should expect to see some progress and following further pushing the baby should be born
- If there is delay in birth of the shoulders then the women should be encouraged to stand, and guidelines for shoulder dystocia followed. This may include encouraging the woman to sit on an emergency exit shelf (at Manchester Birth Centre) or place one leg on the edge of the pool and routine axial traction used.
- If unsuccessful, assist the woman onto a delivery bed or trolley and continue manoeuvres as per *Shoulder Dystocia guideline*

2.8 Third stage of labour

See *Care in Labour* guideline for routine guidance on 3rd stage management. For additional practice points see below

- Uterotonic drugs can be administered into the deltoid to support minimum disruption immediately following birth and avoid administration under water.
- Assist to leave the pool for active management of the third stage. This is because of manual handling risks for the midwife and the difficultly of postpartum haemorrhage management in the pool.
- If the woman wishes to stay in the pool for a physiological third stage, ensure pool temperature is maintained, close observation of the baby is continued and blood loss is monitored closely. If the water colour loses its transparency or there is a brisk loss, the woman should be asked to leave the pool.
- If the placenta has not been delivered within one hour the woman should leave the pool for further management. See *Care in Labour* guideline and the *Retained Placenta and Manual Removal of Placenta Guideline*.

2.9 Cord snapping

2.9.1 Have extra cord clamps readily available in the delivery pack. In the event that the cord snaps, ensure the remaining cord attached to the baby is clamped swiftly; immediately afterwards clamp the maternal end of the cord. Inform neonatologist promptly.

2.10 Suturing

Repair of the perineum should be undertaken as soon as possible to minimise the risk of infection and blood loss (NICE, 2014). See also the *Perineal Repair* guideline.

2.11 Manual handling and Emergency Evacuation from the Pool

Midwives should adopt positions that encourage good posture and protection of the back and spine. All midwives caring for women in a birth pool need to have attended annual manual handling training and site-specific training in emergency evacuation from the birthing pool.

2.12 Infection control

2.12.1 Personal protection

Universal precautions should be adopted. The floor around the pool areas should be kept dry. Midwives should change their gloves/gauntlets regularly. Midwives with any broken skin on hands or arms should not be caring for women in a birthing pool. If sieves are used they must be disposable.

Women with infectious blood borne infections are not suitable for being in labour or giving birth in the pool. For women with positive HIV status and an undetectable viral load then an individualised plan of care should be made.

2.12.2 Preparation of the pool

- Before filling the pool rinse it with cold water and run the taps (hot and cold) for three minutes to remove residual water

- The hot and cold taps should be run daily for three minutes to flush standing water. The pool should be cleaned daily with warm water and a non-abrasive detergent.

2.12.3 Care of the pool after use

See Appendix 2.

2.13 Communication and documentation

All women must be advised that if her condition or the condition of the fetus significantly changes, she will be asked to get out of the pool and appropriate care undertaken in accordance with relevant guidelines.

All women with learning disabilities, visual or hearing impairments or those whose first language is not English must be offered assistance with interpretation where applicable, and where appropriate a telephone interpreter must be used. It is paramount that clear channels of communication are maintained at all times between all staff, the women and their families. Once any decisions have been made/agreed, comprehensive and clear details must be given to the woman thereby confirming the wishes of the women and their families.

Ensure the provision and discussion of information of the risks and benefits with women during the antenatal, intrapartum and postnatal periods.

Staff should aim to foster a culturally sensitive care approach in accordance with the religious and cultural beliefs of the parents and families in our care.

3 Equality, Diversity and Human Rights Impact Assessment

The EqIA score fell into low priority; no significant issues in relation to equality, diversity, gender, colour, race or religion are identified as raising a concern.

4 Consultation, Approval and Ratification Process

During development this guideline has been reviewed by senior midwives, obstetricians and anaesthetists from Saint Mary's at Wythenshawe, North Manchester and Oxford Road Campus. It has been ratified by the Site Obstetric Quality and Safety Committee.

It will be formally reviewed 3 years following its ratification or sooner if there are significant changes in evidence-based practice.

5 References

Benfield, R. D., Hortobagyi, T., Tanner, C.J., Swanson, M., Newton, E. R., (2010). The effects of hydrotherapy on anxiety, pain, neuroendocrine responses, and contraction dynamics during labour. *Biological Research for Nursing* 12 (1), pp 2836.

Burns, E.E., Boulton, M.G., Cluett, E., Cornelius, V.R., Smith, L.A., (2012). Characteristsics, interventions and outcomes of women who used a birthing pool: a prospective observational study. *Birth* 39 (3), pp 192-202.

Cluett E.R., Burns E., Cuthbert A. (2018). Immersion in water during labour and birth. *Cochrane Database of Systematic Reviews*. Issue 5. Art. No.:CD000111.

DOI:10.1002/14651858.CD000111.pub4.Available on-line at https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD000111.pub4/full

Garland, D. (2011) *Revisiting Waterbirth: An Attitude to Care.* London: Palgrave Macmillan. Henderson, J., Burns, E.E., Regalia, A.L., Casarica, G., Boulton, M.G., Smith, L.A., (2014). Labouring women who used a birthing pool in obstetric units in Italy: prospective observational study. *BMC Pregnancy in Childbirth* 14(10), pp 17. Lathrop, A., Bonsack., C.F., Haas, D.M., (2018). Women's experience with water birth: a matched groups prospective study. *Birth* 45(4), 416-423.

National Institute for Health and Clinical Excellence CG190, (2014). Intrapartum care: Care of healthy women and their babies during childbirth. London: NICE. Ulfsdottir, H., Saltvedt, S., Ekborn, M., Georgsson, S., (2018). Like and empowering micro-home: a qualitative study of women's experience of giving birth in water. *Midwifery* 67, pp 26-31.

6 Appendices

Appendix 1: Birthing Pool Inclusion Criteria

Appendix 2: Standard Operating Procedure - Birthing room and Birthing Pool cleaning.

Appendix 1: Birthing Pool Criteria

PREREQUISITE CRITERIA	
Women must have:	a singleton pregnancy, with cephalic presentation at 37 to 42 completed weeks gestation
	normal maternal observations - Pulse < 100bpm, Temp 37.5°C or below, BP < 140/90 (unless known essential hypertension or pregnancy induced hypertension on treatment – see below)
	Hb >90g/L
	reassuring intermittent fetal heart auscultation or adequate recording of normal CTG
	one-to-one midwifery care
	access to telemetry on the obstetric-led delivery units for continuous electronic fetal monitoring if required
	the ability to mobilise in and out of the pool safely
Women must not:	have had recent opiate analgesia. Women must not re-enter the water for a minimum of 2 hours after opiates and until they are no longer drowsy.
	be on a continuous intravenous infusion of any type
	have a history of shoulder dystocia or PPH >1000ml
	have any new intrapartum risk factors including APH
	Have a fetal anomaly, multiple pregnancy, infective skin conditions, active herpes or positive hepatitis status

INCLUSION CRITERIA THESE WOMEN <u>CAN</u> LABOUR AND GIVE BIRTH IN THE POOL*		
		Contraindications to using pool
Telemetry not necessarily required.	BMI <40	
	Group B Strep	Signs of infection. IV antibiotics must be given out of the pool
	Non-significant meconium-stained liquor	Where any suspicion of significant meconium the woman must be asked to leave the pool for further assessment, continuous electronic fetal monitoring and observation.
	Pre-labour SROM	Signs of infection
	Spontaneous labour following Prostin, Propess, cervical ripening balloon or ARM	
	Women on LMWH	<12hrs since treatment dose
	Undetectable viral load if HIV positive	
Telemetry CTG monitoring is required.	Antiphospholipid syndrome	
	Pre-labour SROM >24 before onset of labour	Signs of infection
	Obstetric cholestasis	
	VBAC	> 1 LSCS
	Well controlled essential hypertension / pregnancy induced hypertension with a BP<150/100	
	Reduced fetal movements	
	Renal disease provided BP well controlled (BP<140/90)	
	SGA with normal/abnormal liquor & normal Dopplers	
	Thrombocytopaenia	Platelet count <80
	Thyroid disease (where CTG is indicated)	
	Well-controlled diabetes i.e., GDM or type 2 diabetes controlled with diet or metformin and with normal CBGs.	Women at significant risk of hypoglycaemia or using a sliding scale.

If women with other risk factors, outside of the prerequisite and inclusion criteria, wish to use the birthing pool this should be discussed with the consultant on-call regarding the suitability of labouring and delivering in water

Appendix 2 - Standard Operating Procedure – Birth Centre / Birthing room and Birthing Pool cleaning

Daily Cleaning

- Pool tap run daily (minimum requirement twice weekly for 2 minutes - pool water is tested monthly by Estates and any issue escalated to the appropriate area)
- Non-abrasive detergent to be used to wipe down all surfaces and pool.
- Ensure WOW (workstation on wheels) is clean and dust free

Cleaning after use

Rooms

Commence cleaning birth room from the outer (less contaminated) areas to the inner (most contaminated i.e. bed and pool)

Cleaning to be performed using chlorclean (1000/ppm) or equivalent (i.e. wipes) or haztabs (10,000/ppm) for any blood contamination.

Always ensure appropriate contact time (the time the product is left on the surface before washing off) when using both products - adhere to make up posters (displayed in sluice).

Wear appropriate PPE (aprons and gloves) to clean birth room.

1. If pool has been used, empty and rinse whilst completing other tasks (this might have already been done whilst the woman remains in the room)
2. Strip bed and put sheets in linen bin.
3. Wipe furniture and fittings.
4. Wipe around refreshments station and replace tea / coffee / sugar / cups / spoon / water jug.
5. Wipe down sonicaids, BP monitors, Entonox tubing, call bell, door handles and other patient equipment.
6. Throw any open gel sachets.
7. Clean bathroom (toilet, shower, sink, taps), use Haztabs if contaminated with blood.
8. Empty all bin bags and replace.
9. Wipe down outside of bins and the outside of the base.
10. Clean bed and pool as below
11. Mop floor with chlorclean, use Haztabs if contaminated with blood.
12. Remove PPE immediately after cleaning room and perform hand hygiene.
13. Complete room cleaned signage.

Beds

1. Remove organic matter with approved detergent wipes and clean bed / mattress / couch with detergent wipes .
2. Disinfect bed / mattress/couch with Haz-tab solution (10,000ppm). Allow to dry for 2 minutes.
3. **Rinse bed / mattress / couch with cold water to protect mattress integrity** and allow to dry
4. Make bed

Pool

1. Remove debris with disposable sieve and place in clinical waste bag.
2. Empty pool and rinse away any organic material.
3. Clean the pool with a disposable soft cloth/or disposable mop head and a non-abrasive detergent i.e. detergent and water
4. Use Haz Tabs to disinfect the surface area of the pool paying particular attention to any light fittings and drainage outlets.
5. Allow Haz tab solution to sit on the surface for 2 minutes (contact time) to ensure disinfected.
6. When disinfecting the pool start at the top of the pool and work in a downwards direction.
7. The floor of the pool should be disinfected from the point furthest away from the plug first and should finish at the plug.
8. Rinse the pool thoroughly with cold water.

Wipe around the outside of the pool, the pool step and wall near pool

Stocking		
Linen cupboard by the window	**Delivery Trolley**	**Wooden drawers**
• Sheets • Towels • A few large blankets • INCO sheets • Bed pans/vomit bowls • Maternity pads	• Delivery pack • Placenta bag • Eye protection • Gel sachets	• Entonox mouthpieces x 2 • Pool thermometers x 4 • Sterile gloves various sizes • Amnihooks x 2 • In/out catheters x 2 • Gel sachets • Small suture instrument packs x 2 • Packs of sterile swabs x 2 • Blue undersheets/sterile field x 2