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Use of the Pool During Labour and Birth

Key Points

- All women with no contraindications should be offered the use of a pool in labour and for delivery.
- Women who require continuous fetal monitoring can use the pool with the use of telemetry, providing there are no other contraindications.
- A birth in water should adopt a “hands off” approach, supported by verbal guidance from the midwife.

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This guideline has been registered with the trust. However, clinical guidelines are guidelines only. The interpretation and application of clinical guidelines will remain the responsibility of the individual clinician. If in doubt contact a senior colleague or expert. Caution is advised when using guidelines after the review date. This guideline is for use in Frimley Health Trust hospitals only. Any use outside this location will not be supported by the Trust and will be at the risk of the individual using it.

Version Control Sheet

Version	Date	Guideline Lead(s)	Status	Comment
1	1st March 2016	Christina Antigoni Chynopotamou	Final	First cross site version
2	December 2020	F Meehan, S Boardman (Juniper birth centre lead midwives)	Final	Updated and approved at OGCGC

Related Documents

Document Type	Document Name
Trust guideline	Care of Women In Labour

Abbreviations

CEFM	Continuous electronic fetal monitoring
APH	Antepartum haemorrhage
BMI	Body mass index
IUGR	Intrauterine growth restriction
PPH	Postpartum haemorrhage
USS	Ultrasound scan

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1. Introduction

All women with a term pregnancy, who are without any contraindications, should have the option to immerse in water during labour and delivery for analgesia. Evidence suggests that water immersion during the first stage of labour reduces the use of epidural analgesia and duration of the first stage of labour.

Prior to caring for a woman choosing water as pain relief during labour or birth, the midwife should be fully aware of the following guideline.

2. Criteria for the use of the pool.

Some women will require CEFM with telemetry in the pool on the labour ward. Refer to the fetal monitoring guideline.

2.a Criteria for midwives:

- When facilitating birth in water, there must always be one midwife and another staff member present.
- If the midwife has open cuts or lesions on his/her hands or arms, they should ensure that they wear long sleeve gauntlets and should discuss providing care to women using water with the midwife in charge.
- The midwife should be aware of her back at all times. She should minimise bending over wherever possible. Encourage the woman to use the step in the pool to raise herself if necessary.

2.b Criteria for use of pool

- A singleton pregnancy, from 37 – 42 weeks gestation with a cephalic presentation.

- Women should be offered the pool when in established labour (≥4cm with strong regular contractions). Midwives should observe contractions closely the first hour after immersion, along with the mother's perceptions of any changes to her labour. If the contractions are not as regular, suggest she leaves the pool to increase contractions and she can return once contractions have regained regularity.

- The pool can be used following induction of labour when labour has established without the use of oxytocin.

- Mothers who are Group B strep carriers can use the pool and they should be offered intrapartum antibiotics which should be administered via either a cannula or a "butterfly". Mothers should be advised to avoid getting the cannula wet and must be informed of the chance of needing a new cannula if this occurs whilst in the pool.

3. Contraindications for pool use

In healthy women at low risk of complications there is moderate to low-quality evidence that water immersion during the first stage of labour probably has little effect on mode of birth or perineal trauma, but may reduce the use of regional analgesia. The evidence for immersion during the second stage of labour is limited and does not show clear differences on maternal or neonatal outcomes intensive care. There is no evidence of increased adverse effects to the fetus/neonate or woman from labouring or giving birth in water. Available evidence is limited by clinical variability and heterogeneity across trials, and no trial has been conducted in a midwifery-led setting.

Cochrane Database of Systematic Reviews Immersion in water during labour and birth Cochrane Systematic Review - Intervention Version published: 16 May 2018 see what's new https://doi.org/10.1002/14651858.CD000111.pub4

- Concerns with maternal or fetal wellbeing (i.e., pyrexia or tachycardia).
- Not cephalic fetal presentation, e.g., breech
- Current significant APH
- In instances with the use of systemic opioid (i.e., pethidine) within two hours or longer if the woman feels drowsy or if the woman is taking any medication which causes significant drowsiness.
- Major medical disease requiring intensive maternal monitoring, e.g., cardiac disease, diabetes requiring sliding scale.
- Pregnancy complications posing risk of seizure or collapse, e.g., current APH, PET, epilepsy.
- Significantly compromised mobility
- BMI 40 or greater
- Maternal weight higher than the hoist weight allowance although we have different ways of evacuation on birth centres and labour ward.
- Maternal pyrexia (37.5 on two occasions or 38 once) and or evidence of active infection
- Active herpes
- Hep B
- HIV
- Gestation less than 37 weeks or more than 42 weeks
- Placenta praevia

- Significant polyhydramnios
- Head 5/5 palpable
- Multiple pregnancy
- Significant meconium
- IUGR

Women who wish to use the pool who require continuous fetal monitoring, can do so with the use of telemetry for labour and birth providing there are no other contra indications as above.

4. Criteria for use of pool in labour but not for 2nd stage and birth.

- Risk of postpartum haemorrhage (PPH) (women who have had previous PPH <1000mls, suitable for birth centre, can deliver in the pool as per admission criteria)
- Previous history of shoulder dystocia (review on individual basis)
- Fetal size estimated to be >97th centile (by USS not fundal height)
- Previous 3rd or 4th degree tear (to deliver out of the pool to allow visualisation of perineum at delivery).

5. Preparation prior to using the pool

- Water temperature.

  For the first stage of labour, midwives should consider that evidence suggests benefits of women regulating the temperature of the pool for their own comfort for the first stage of labour. Some research indicates the that the pool water should be prepared to a temperature of 36-37.0°C.

  The pool water temperature should be 37.0-37.5°C for the second stage of labour.

- Equipment needed include: step to allow access into the pool, handheld mirror to view baby's head, thermometer, waterproof Doppler, towels, delivery pack and a single use sieve to remove debris from the pool.
- There should be a dry area for the mother to go if she wants or needs to leave the pool at any time.
- It is the woman’s choice whether she wears clothes / swimwear or to be naked.
- The woman must remove nail polish before entering the pool in order to protect the pool from getting stained (for hospital pools only).

6. Care during the first stage of labour

- Women who utilise water for labour and/or birth should be deeply immersed in the water so that their abdomen is covered.
- Ensure that maternal temperature and the temperature of the water are checked and documented hourly. The water must remain between 36-37.0°C. Midwives must be prepared to alter the temperature of the water in case of an unexpected quick birth. If the mother's temperature rises by of 1°C above baseline, the water should be cooled or the mother advised to leave the pool in order to cool down.
- Observations during the first stage of labour are the same as when caring for a woman on land (refer to care of women in labour guideline), with the exception of maternal temperature and water temperature.
- If there are any difficulties in auscultating the fetal heart clearly or difficulty having a good trace with telemetry, the woman should be asked to change position. If there are any concerns about the fetal heart rate the woman should be asked to leave the pool.
- Encourage the woman to move and explore different positions in the pool.
- If there is faecal contamination this should be removed using the sieve.
- Encourage the woman to keep well hydrated whilst in the pool. Isotonic drinks are preferable to water alone.
- Ensure that the woman urinates regularly. The mother should have the choice to leave the pool, stand in pool with a bed pan underneath or urinate in the pool.
- If the mother requires further pain relief the options available whilst in the pool include massage, Entonox, hypnobirthing / self-hypnosis, aromatherapy and reflexology.
- Ensure that once the woman is immersed in water, regular contractions continue. If the contractions appear to fade or stop, the midwife should consider using aromatherapy and/or ask the woman to leave the water, mobilise, void her bladder, have refreshments and allow contractions to increase.
- Aromatherapy should be used as per the use of essential oils guideline. Oils should not be used in the water as they are not licensed for use on neonates. However, they can be used for inhalation or on exposed areas such as shoulders.
- Vaginal examinations can be performed whilst the woman is in the pool if the midwife feels competent to offer this.
- If at any point events arise which indicate that the women or her baby no longer meets the criteria to use the pool (i.e. raised blood pressure, fetal distress, significant meconium liquor, vaginal bleeding), then the woman must be asked to leave the pool and the appropriate action taken by the midwife. This may involve reassessment and referral to an obstetrician.
- The partner may enter the pool wearing appropriate clothing if the couple wishes.

7. Care during the second stage of labour

- The woman should not enter the pool if any part of the vertex is visible. If the woman stands up out of the water and any part of the vertex is visible, she should not re-immerse in the water.

- The temperature of the water must be 37.0-37.5°C during the second stage of labour. To ensure the temperature of the water is maintained, it must be checked every thirty minutes during second stage.

- Observations during the second stage of labour must be the same as when caring for a woman on land, with the exception of temperature (refer to care in labour guideline).

- If at any point, events arise which indicate that the mother or baby no longer meets the criteria to use the pool (i.e., raised blood pressure, fetal distress, significant meconium liquor, vaginal bleeding), or there is delay in the second stage, then mother must be asked to leave the pool and the appropriate action taken by the midwife.

- The birth should have a “hands off” approach, supported by verbal guidance from the midwife. The baby must be born completely underwater with no air contact until s/he is raised gently to the surface, face first, either by the mother or midwife.

- During the birth, once the head is born, leave the baby untouched and await restitution. If the baby is not born with the next two contractions the woman must stand up, the pool must be drained and the midwife must attempt to deliver the baby. The mother can put one leg up on the side of the pool to aid delivery. If this does not work, the woman must leave the pool, lay flat on the floor and the guideline for the management of shoulder dystocia must be followed.

- An episiotomy should never be performed underwater. If the midwife considers that an episiotomy is necessary to facilitate delivery, the woman must leave the pool.

- The midwife should be alert to the possibility of occult cord rupture and should be prepared to clamp the baby's end of the cord immediately if the cord snaps.

- Following the birth, rest the baby at the level of the mother’s uterus, ensuring that the baby’s head is never re-immersed in the water and that the baby’s body is kept in the water to keep him/her warm.

- If the baby needs resuscitation, clamp and cut the cord and take the baby to the resuscitaire. Ensure the baby is dried and follow the neonatal resuscitation guideline. It is important to note that babies born in water are often very calm and do not cry, so if in any doubt check the baby’s heart rate.

8. Care during the third stage of labour

Mothers should be given adequate information prior to the birth to allow them to make an informed decision as to whether they would like an active or physiological third stage. The pool should not be drained/emptied before the woman has stepped out of it.

Physiological management

i. A physiological third stage can take place in or out of the pool. If there is a delay in the third stage the woman should be asked to leave the pool.

ii. Management of the third stage of labour in the pool must be consistent with guidelines for the management of labour.

Active management – should not be performed while the woman is immersed in water.

iii. Once the baby is born, administer syntocinon or syntometrine either into the deltoid muscle or by asking the mother to get out of the pool or to lift her leg out of the water (refer to care of labour guideline). Clamp and cut the cord and then assist the mother to leave the pool, ensuring that the mother and baby are kept dry. Once out of the pool, adhere to usual third stage guidelines (as outlined in care in labour guideline) and deliver the placenta.

Estimated blood loss

It can be difficult to measure/estimate blood loss accurately in the pool. The midwife caring for the woman must make a clinical decision about blood loss by assessing the mother's condition and looking at the water after delivery. Because blood is diluted when the mother is in the pool, it may look like there is more blood than there really is. However, if in any doubt, always assist the woman to leave the pool immediately.

9. Suturing

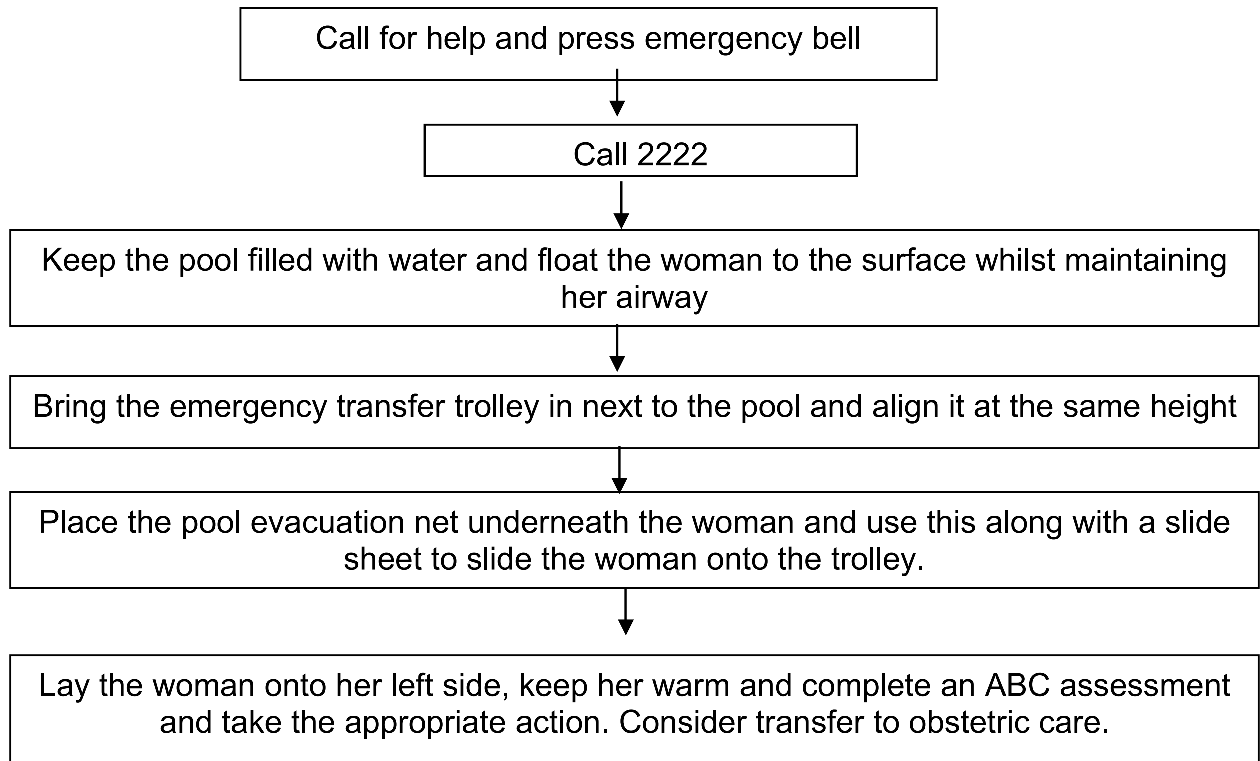
Perineal tissue needs time to revitalise following immersion in water. If a perineal tear is sutured too soon it can mean that the tissues are friable and this may affect healing. If the woman is stable and the tear does not need suturing immediately, it is appropriate to delay suturing for an hour after the birth.

10. Recommendations for dealing with an emergency in the pool

Feeling unwell

If the woman reports feeling unwell at any stage assist her to leave the pool - anticipate collapse. If the woman does lose consciousness, proceed to pool evacuation.

Pool evacuation



At FPH there is an electric hoist in the pool room on the main labour ward that can be used for evacuation.

11. Infection control

To ensure that infection control standards are met and maintained the pool must be cleaned using Chlor - Clean solution if no blood or body fluids have contaminated the pool. Otherwise, Haz tabs solution needs to be used. Ensure no water is left sitting in the pool.

12. Auditable standards

- Criteria met for use of the pool
- Monitoring of pool temperature in the first and second stages of labour
- Monitoring of maternal temperature

13. Monitoring compliance of guideline

- Monthly statistics are collected for the Birth Centre to look at the number of women that use water during labour and the amount of women that have water births. This data is displayed for patients to see and also fed back monthly at birth centre meetings.

- If any practical issues with the use of water are identified the lead midwife should be informed. This will be investigated as necessary and changes made if appropriate.

- This guideline will be subject to three yearly audit. The audit midwife is responsible for initiating the audit. Results to be presented to the departmental clinical audit meeting. Action plans will be monitored at the quarterly obstetrics and gynaecology clinical governance committee.

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