Wrightington, Wigan and Leigh Teaching Hospitals
NHS Foundation Trust

Title of Guideline	**Labour and birth in water**
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Division & Specialty	Surgery - Obstetrics
Guideline Number	**Obs 20**
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Approving Committee(s)	Clinical Cabinet
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Explicit definition of patient group to which it applies	Maternity patients
Abstract	
Statement of evidence base of the guideline Evidence Base (1-5)	

1a	Meta analysis of RCT
1b	At least 1 RCT
2a	At least 1 well designed controlled study without randomisation
2b	At least 1 other well designed quasi experimental study
3	Well –designed non-experimental descriptive studies (ie comparative / correlation and case studies)
4	Expert committee reports or opinions and / or clinical experiences of respected authorities
5	Recommended best practise based on the clinical experience of the guideline developer

Consultation Process	O&G Guideline Group
Target Audience	Maternity staff
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.	

Guidelines for supporting mothers, who choose to labour in water and /or birth underwater, either in the hospital or community setting.

Written by: Susan M. Baines November 2006, replacing 2 previous water birth guidelines considering hospital and community separately, updated November 2009, reviewed November 2012 by Anne Clayton and November 2015 by Amanda Hutchinson. Updated by Samantha Wagner January 2019 and by Kirsten Cunliffe April 2022 (v6). Emergency evacuation of pool flow chart added by Jo Birch February 2023 (v6.1)

Purpose of guideline

This guideline is for midwives who are caring for women in labour and/or give birth in water.

In accordance with NICE guidance, women experiencing low risk pregnancy who choose to labour and/or deliver in the water should be given the opportunity to do so.

Inclusion criteria

- Normal term pregnancy (37 -42 weeks)
- Singleton fetus
- Normal Baseline observations
- Clear liquor at rupture of membranes
- Uncomplicated pregnancy
- Spontaneous labour

Exclusion criteria

- Induced onset of labour
- Any pre-existing concern about the condition of the mother or baby.
- The use of systemic opioids within two hours of requesting to enter a pool of water.
- BMI $\geq$ 40
- Meconium liquor
- PV Bleeding
- Delay in first or second stage

For those women who do not meet the inclusion criteria: a full risk assessment should be performed and discussed with the multidisciplinary team (MDT) including input from an obstetric consultant. The woman should be provided with all information to allow her to make an informed choice and detailed plan of care should be devised between the woman and the MDT. This should be documented for use during the intrapartum period.

Additional aspects for consideration

Women who meet the inclusion criteria can use the pool for labour and birth providing labour commences spontaneously prior to 24 hours of rupture of membranes

GBS carriers requesting a waterbirth should be advised that there is no evidence for or against this choice. If a woman wishes to have a waterbirth she should receive intravenous antibiotics out of the pool and every effort should be made to protect the I.V. cannula which should be covered with a waterproof dressing.

Information and consent

Women should be made aware that if the midwife has concerns or is unable to successfully auscultate the fetal heart then the woman will be asked to leave the pool.

Staff considerations

The midwife providing care must be competent in the management of labour and birth in water. Any midwife requiring extra support or training in facilitating waterbirth should contact the maternity practice education team.

Procedure

Antenatal care and considerations

	Action	Rationale
1.	During the antenatal period midwives should discuss (as part of their overall discussions regarding options for pain relief) the use of immersion in water for labour, during the antenatal period with all women classified as, “low risk”. All discussion should be documented contemporaneously.	To facilitate informed choice and consent. To support inter-professional communication and thereby enhance quality of care.

2.	A full risk assessment should be undertaken by the midwife if a water birth is chosen by a mother, whether in the home or maternity unit setting. If the woman does not meet the inclusion criteria, then a referral should be made to the obstetric consultant for MDT discussion and plan to be devised.	To maximise the health and safety of the mother and baby.

Care of mother and baby during labour

All intrapartum care including monitoring of fetal heart, maternal observations and assessment of progress should be carried out in line with the intrapartum care guideline Obs 37.

	Action	Rationale
1.	One midwife should attend the mother, when the active stage of labour has commenced, whether at home or in the unit environment. Two midwives should be present for the birth. A full antenatal check and baseline observations should be taken before the woman enters the pool. When at home the woman should be advised to wait until the midwife arrives before she enters the pool.	To safeguard the health and safety of the mother in case emergency pool evacuation is required. To encourage reflective practice and skill sharing.
2.	Ambient room temperature, either in the home or maternity unit setting should be comfortable. The room should be warm and well ventilated. The ideal temperature is suggested to be between 22-28^{o}C	To minimise the risks associated with maternal pyrexia, including maternal vaso-dilatation, fetal tachycardia and fetal compromise.
3.	Ensure all resuscitation and other equipment is checked and available. In the case of a home water birth, ensure plans are in place to support an emergency situation.	To support the health and safety of the mother and baby.

4.	Be aware of individual pool filling and emptying times.	To allow sufficient time to achieve the correct depth / temperature of choice. To be aware of how quickly the water can be reduced in an emergency.
5.	The pool should be filled to the level of the mother's xiphisternum (measured when she is in the sitting position in the pool).	Creates buoyancy, which supports maternal and fetal safety by allowing free and unrestricted movement within the pool.
6.	Oral fluids should be encouraged.	To avoid maternal and attendant dehydration.
7.	Ensure the delivery suite coordinator is informed that pool in use and aware of any documented plan of care.	To allow provision of safe care.

First Stage of Labour

	Action	Rationale
1.	The water temperature should be as per the woman's preference to a maximum of 37.5 ^{o}C. Pool temperature should be checked hourly (NICE 2017).	Pain can alter the perception of temperature. To reduce the likelihood of chilling or scalding, hypothermia or hyperthermia. To enhance maternal and fetal safety.
2.	Maternal temperature should r be performed hourly when in the pool. If maternal temperature is above 37.5 ^{o}C she should be advised to leave the pool (NICE 2017).	To ensure contemporaneous records of practice are maintained (NMC 2018). To detect any deviations from normal progress promptly.
3.	An underwater Aqua Sonicaid should be used to assess the fetal heart rate. Findings should be documented.	To enable fetal assessment.

4.	The water should be kept as clear as possible and visually checked at regular intervals. As far as possible, faecal matter should be removed, a sieve may be useful. Heavy faecal contamination requires the mother to vacate the pool temporarily whilst cleaning takes place.	To support the health and safety of the mother and fetus by maintaining visibility. To reduce the likelihood of infection E coli and Pseudomonas are a potential source of maternal and neonatal infection.
5.	If there are concerns about maternal / fetal wellbeing at any time, the woman should be advised to vacate the pool and the midwife should adopt the trust moving and handling procedure medical opinion should be sought. In the home, the ambulance service and the maternity unit should be contacted promptly, and the woman transferred to the maternity unit accompanied by a midwife. Observations should be maintained and recorded.	To ensure the health and safety of the mother and baby.

Points to consider regarding pain relief

	Action	Rationale
1	Certain forms of pain relief requested by the mother may be unsuitable if she wishes to labour and or birth in a pool. Entonox may be inhaled judiciously so as to prevent maternal hyperventilation and subsequent loss of control. If the mother requests any other form of pain relief she should be asked to vacate the pool.	Equanox is not accumulative within the body and has no significant side effects (Steffani et al 1982). The mother can opt in and out of using it.
2	Sedatives / analgesics should not be administered in the 2 hours prior to entering the pool or whilst the mother is in the pool. The mother should not return to the pool if feeling drowsy.	To ensure the health, safety and wellbeing of the mother.

Second Stage of Labour

	Action	Rationale
1.	A “hands off” approach should be adopted by the midwife. Vaginal examinations may be undertaken in the pool if required. Progression of emerging head can be observed using a mirror. A non-touch technique should be used and encouragement given for delivery of the head and body.	Within the pool, the aim is to minimise tactile stimulation of the emerging baby underwater, thus reducing the likelihood of fetal stimulation of respiration.
2.	It is not necessary to feel for a nuchal cord. The cord can be loosened and disentangled in the usual manner as the baby is born. (Tight loops of cord around the neck might increase the risk of cord avulsion and bleeding). The cord must not however be clamped and separated whilst the baby is underwater.	Any clamping / separating of the umbilical cord may stimulate the baby to breathe.

3.	The baby should be born completely underwater, with no air contact until he/she is raised to the surface gently afterwards.	Contact with air may stimulate premature breathing (Johnson 1996).
4.	If the woman raises herself out of the water and exposes the fetal head to air, once the presenting part is visible, she should be advised to remain out of the water.	To reduce the risk of premature gasping underwater (RCOG/RCM 2006).
5.	If the baby does not deliver spontaneously women should be asked to stand up out of the water and encouraged to lean over the side of the pool. The water should be drained and an attempt to deliver the baby made. The woman can be asked to place her leg on the side of the pool or place one leg on the step to widen the diameter of the pelvis (Garland 2011) and attempt to deliver the baby. Emergency call bell must be used if baby does not deliver after one unsuccessful attempt. The woman must leave the pool with assistance to the bed and shoulder dystocia guideline followed.	To deliver baby as safely as possible.
6.	Once the baby surfaces, avoid him/her submerging again.	To avoid neonatal asphyxiation
7.	Avoid undue traction on the umbilical cord as the baby's head surfaces from the water.	To minimise the risk of the cord snapping (Gilbert & Tooley 1999)

Third Stage of Labour

	Action	Rationale
1.	For a physiological third stage, the woman may remain in the pool to deliver the placenta. The temperature of the pool must be maintained during this time. Blood loss to be observed closely. If blood loss appears excessive then the woman should be assisted from the pool and active management commenced. For an active third stage oxytocic preparations should be administered out of the water.	There is no evidence to contraindicate delivery of the placenta in water.

Complications

Emergencies in the pool although rare can occur and the obstetric team should be trained to manage such situations. In the event of an Obstetric emergency, evacuation of the pool may be required. Please see appendix 1 for evacuation of the pool management

	Action	Rationale
1.	The midwife is accountable for her professional practice and must utilise her clinical judgment in responding promptly to any deviations from the normal.	To reduce the risk to mother and baby (NMC 2015).

Pool Decontamination

	Action	Rationale
1.	If the pool is in the maternity unit, Midwives (or a member of staff delegated by the midwife) need to follow pool decontamination and disinfection policy under infection control on the intranet. In the home, the responsibility rests with the parents. 1**.** Empty pool. 2. Wearing disposable gloves and a plastic apron, clean the whole surface of the pool with a cloth and neutral detergent. 3. Rinse off with fresh water**.** 4. Make up a solution of 1000 ppm (0.1%) Milton Solution, by diluting 50 mls Milton 2% in 1 litre of cold water. 5. Put plug in plughole and empty the solution into the pool, coating all surfaces with a cloth. 6. Drain residual solution and rinse all surfaces with fresh water, paper dry as far as possible and leave to dry in air. If using a mop to clean the pool it must be disposable and not reused.	To achieve decontamination of the pool and reduce the likelihood of cross infection. Cream cleanser should not be used as it scratches the surface.
2.	The plughole must be rust free and the pool surface free from scratches and chips. Report any problems to the shift leader.	Important in the general maintenance and decontamination of the pool.
3.	If the pool is not used for three consecutive days, the taps and shower should be opened on full and run for 1 minute and then dried as above.	To reduce the risk of Legionella infection.

References

1. NMC (2018) The Code: Professional standards and behaviour for Nurses and Midwives https://www.nmc.org.uk/standards/code/
2. National Institute for health and Clinical Excellence (2017) Clinical Guideline CG190. Intrapartum Care: care of healthy women and babies during childbirth (2014 updated 2017) London: NICE

Process for audit

There are no specific audit criteria for this guideline but it will be audited as required dependent on clinical indications.

Appendix 1

Emergency Evacuation of the Birthing Pool Flowchart

Emergency Evacuation of the birthing pool