

Policy Title:	<u>GUIDELINES FOR THE USE OF THE POOL DURING LABOUR AND DELIVERY</u>		
Executive Summary:	To formulate guidelines to implement best practice for the use of the pool during labour and delivery.		
Supersedes:	Outdated Guideline 2005 & Jan 2008		
Description of Amendment(s):	Re-written to reflect NICE Guidelines on Intrapartum Care 2007 To reflect the strategy for reducing the C/S rate NHS Litigation CNST Standard		
This policy will impact on: Maternity and Neonatal Services			
Financial Implications:			
Policy Area:	Maternity	Document Reference:	Guidelines for the use of the pool during labour and delivery
Version Number:	3	Effective Date:	January 2010
Issued By:	Maternity Services	Review Date:	Dec 2012
Authors:	J Ingelby RM	Impact Assessment Date:	January 2010
APPROVAL RECORD			
	<u>Committees / Group</u>	<u>Date</u>	
Consultation:	Midwives, Obstetricians Maternity Services Users, MSLC Educational Link Tutor. Infection Control, Manual Handling, Paediatricans	January 2010	
Approved by: Clinical Director Mr V Hall Date Associate Director Mrs G Hopps Date	Maternity Women's and Children's Clinical Governance Group.	January 2010	
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GUIDELINES FOR THE USE OF THE POOL DURING LABOUR AND DELIVERY

RATIONALE

To formulate guidelines to implement best practice and to promote and safeguard the interests, safety and well being of mother and baby.

The following guideline is based upon information available to date (2009). Research based literature is limited as there have been no large, collaborative, randomised controlled trials to date. A major national survey reported no increase in the incidence of adverse outcome for mother and baby following water immersion for women in spontaneous labour following an uncomplicated pregnancy. (Alderice et al 1995)

The National Service Framework (2004), NICE (2007) & Maternity Matters (2007) published clear standards in relation to women having access to water for pain relief and birth.

ANTENATAL CARE

- The buoyancy of water, and ease of movement provided by a birthing pool has been shown to reduce the pain of labour and help the mother cope better with her contractions, (Taha 2000, Nikodem 1999, Otigbah et al 2000, Saunders et al 2000).
- A discussion regarding the benefits of water (see appendix) should occur with a woman and her partner to enable an informed choice with regard to care. This can be done at any stage during pregnancy; however it should be included within parent education and at the 36/40 pre birth antenatal examination. This should include the benefits of water for the early latent phase.
- Women should be informed that there is insufficient evidence to either support or discourage giving birth in water (NICE, 2007).
- Women who are judged to be high risk such as those women having a vaginal birth after caesarean section should be offered the use of water for relaxation and pain relief in the latent phase of labour
- An information leaflet will be available to all women and their partners at 28/40. This should support the discussion process.
- Comprehensive documentation of all discussion with the woman and her partner regarding the use of the pool for pain relief/birth. (NMC, 2008). This should be recorded in the hand held records or the medical file.

On entry to the labour ward, all low risk women should be offered the pool as a form of pain relief if there is one available. This discussion must be documented in the labour records

- If a woman is wearing nail varnish on her toes she should be asked to remove it as it marks the bottom of the pool, however if this is not possible the woman should not be denied the use of the pool.

CRITERIA FOR THE USE OF THE BIRTHING POOL

- Woman's informed choice
- Low risk pregnancy – if unsure discuss with the Labour Ward Co-Ordinator/Specialist Obstetrician on call
- Clear liquor if the membranes have previously ruptured
- Normal term pregnancy at 37+ weeks
- Singleton fetus with cephalic presentation
- SROM <24 hrs (in absence of complications such as pyrexia)

- No systemic sedation within 2 hours or if drowsy.
- Discuss the need for the woman to leave the pool if an emergency or fetal compromise occurs.

Group B- Haemolytic Streptococcus.

- On the bases of an over view of RCT's (Small 2005) there is no evidence to suggest that low risk women who are receiving antibiotics to reduce colonisation of GBS should be denied the use of the pool. Refer to the ECNHST Guideline for the Antenatal Intrapartum Management of those women with Group B Streptococcus.
- If the woman requests antibiotics in labour these can still be given IV and should not interfere with the use of the pool.

Previous Retained Placenta.

- A women who has had a previous retained placenta may use the pool.
- A venflon must be sited and active management of the 3rd stage should be followed as per the East Cheshire NHS Trust Third Stage of Labour Guideline

Depth and Temperature of Water.

- The pool should be filled to the level of the mother's breasts. It is important not to immerse her up to her neck in warm water. The mother may get too hot if the water level is above her breast and she is likely to feel out of control
- The depth of water and increased buoyancy promotes unrestricted movement in the pool, which facilitates the progress of labour and enhances maternal control (Hall and Holloway 1998).
- The temperature should be both comfortable for the mother and at a reading to avoid hyper/hypothermia.
- The fetus has no capacity to regulate its own temperature and loses heat via the placental circulation, which is a slow process. Therefore the

Recommended water temperature range for the **first stage of labour 35-37°**
Recommended water temperature range for the **second and third stage of labour 36.5-37.5°** (NICE, 2007)

- Water temperature on entry to the pool should be lower than 37°C initially to avoid over heating.
- The temperature should be continuously monitored using a floating thermometer. The water temperature should be documented in the labour records every hour and on approach to the second and third stage of labour

Pain relief

- Explanation of each choice of pain relief should be given to women.
- Entonox may be used if required.
- No birthing pool or bath within 2 hours of opioids or if drowsy (NICE 2007). Therefore a woman who has had Pethidine, Meptid, or Diamorphine may enter the pool if after 2 hours the sedative effects have diminished.

Midwifery care

- Routine maternal observations as per the ECNHST Latent, First, Second and Third Stage of Labour should be undertaken ensuring that the mother is disturbed as little as possible.
- Entry to the pool should be when the woman is becoming uncomfortable and requiring further pain relief usually with the on-set of regular contractions.
- For women experiencing dystocia, immersion in water has been found to reduce subsequent epidural use and augmentation and intravenous infusion (Cluett et al 2004).
- The pool or bath should be offered to women who may have a long latent phase.
- Fetal heart should be auscultated every 15 minutes after a contraction for 1 minute (East Cheshire NHST Fetal Monitoring Guideline, NICE 2007).
- Every 30 minutes document frequency of contractions (NICE 2007). If contractions appear to decrease in frequency and strength, the woman should be asked to leave the pool temporarily until contractions return.
- Every four hours perform a vaginal examination (NICE 2007). Women ideally should be asked to leave the pool for vaginal examination.
- Regularly check frequency of bladder emptying (NICE 2007). Women should be asked to leave the pool to urinate.
- The women should be able to move and explore different positions in the pool any time during labour and birth. She may choose to squat, kneel or be on all fours, rather than sit. The use of towels for comfort over the edge of the pool can be helpful.
- Faecal contamination of the pool should be removed as E Coli is a potential source of infection. In the event of heavily contaminated with faeces in the second stage, consider asking the mother to leave the pool temporarily, empty and refill.
- The mother should be encouraged to drink plenty of water whilst in the pool

Management of the 2nd Stage.

- As the birth approaches, the woman will instinctively know whether she wishes to remain in the pool. Some women prefer to be on dry land. It is the **woman's decision** whether or not to remain in the pool for birth.
- Routine labour observations as per the ECNHST Second Stage of Labour should be undertaken with as little disturbance to the mother as possible.
- Pushing should be physiological (non-directed). That is the mother should be encouraged to push only as and when she has the urge and should not be hurried.
- The length of the second stage is less significant than the length of active pushing (Piquard et al 1989). Commanded or directed pushing may lead to imbalance between carbon dioxide and oxygen in the maternal/fetal circulation (Calderyro-Barcia et al 1981, Roberts et al 1987, Paine and Tinker 1992, Roodt and Nikodem 2005).
- Whenever possible, two midwives should attend pool births for the health and safety of the mother and baby.
- The birth should be "hands off", with only gentle verbal guidance from the midwife. This is to minimise any stimulation for the emerging baby underwater (fetal safety, Johnson 1996).
- It is not necessary to feel for the presence of nuchal cord. It can be loosened and disentangled as the baby is born in the usual manor. The priority is to leave the umbilical cord intact and pulsating (to prevent a reflex bradycardia).
- **Do not clamp and cut the cord** as this may stimulate the baby to breathe (Johnson 1996) and precludes the option of a genuinely physiological third stage.
- The baby should be born completely underwater, with no air contact until he/she is raised to the surface gently afterwards.

- Ensure the head of the baby emerges into the air first, preferably face, within a couple of minutes.
- Contact with the air may stimulate breathing. As with any reflex, the longer it is maintained, the less intense the response. Long exposure to the diving reflex leads to episodic breathing, which eventually results in aspiration (Johnson 1996).
- Avoid undue traction on the umbilical cord as the baby's head surfaces from the water. This is to minimise the possibility of cord snapping (Gilbert and Tookey 1999, Crow & Preston 2002).
- Once the head has been born the body must deliver within 3 contractions, if this does not occur shoulder dystocia should be suspected. The woman must be asked to leave the pool for delivery of the body.
- Following the birth keep the baby warm by keeping the body immersed and keep close to the mother check the temperature of the pool to ensure a temperature of 37°.
- Once the head is out of the water it must not be re-submerged.
- Rest the baby at about the level of the mother's uterus in order to prevent excess transfusion to the baby (Dunn 1966, Lapido 1972, Enkin et al 1989).
- The depth of the water may need to be adjusted if the cord is short.

The Third Stage of Labour

- Ensure the Water temperature is 36.5-37.5° (NICE, 2007)
- A physiological third stage should be an option, as for any low risk birth. **The cord is left unclamped until the placenta and membranes have been expelled by the mother while still in the pool.** In the absence of complications, there is no evidence to support removing the mother from the pool for a physiological third stage, and this disturbs the first minutes of crucial maternal infant contact (Burns, Kitzinger 2005).
- There is no evidence of water embolism when the third stage is conducted in water.
- It is difficult to accurately estimate blood loss in the water therefore it should be documented as more or less than 500mls.
- Active management of the third stage should be conducted out of the water, therefore the pool must be drained and the woman asked to leave the pool shortly after birth.

Examination of the Perineum

- After the 3rd stage is complete, examination for trauma to the perineum should be undertaken with informed consent.
- There is no evidence to say that leaving an hour before suturing after a pool delivery is necessary, therefore this can be left up the midwife's discretion.

Emergency Situations

- In the rare case of an emergency situation, ask the mother to stand up or to leave the pool.
Reasons for leaving the pool
 Meconium stained liquor
 Fetal or maternal compromise
 Slow progress
 Maternal request
- If the woman has collapsed in the pool, summon aid, maintain the woman's airway, consider filling the pool with water to allow flotation to the surface and remove her from the pool using the pool-net (refer to manual handling).

- Transfer out of the pool room using a transfer trolley immediately for further resuscitation measures.

Infection Control

- As with land births, in order to protect against infection the midwives should wear gloves, gauntlets are advisable.
- In addition staff must ensure that all cuts and abrasions are covered with a waterproof dressing.
- The taps should be run for 3 minutes before filling the birthing pool.
- The pool should be drained immediately on exit and rinsed with clean water, ensuring that all visible products from delivery are removed.
- The pool and other equipment used such as sieves and thermometers must be washed with a neutral detergent and a disposable cloth used. (4 Haz tabs per 1 litre water). See infection control protocol.

Waterbirths at Home

- It is the responsibility of the woman and her birthing partner to arrange private hire of a birthing pool and its assembly and maintenance.
- In addition the filling and the emptying of the pool is also the responsibility of the woman and her partner.
- Care should be taken to ensure that the pool is not near any electrical equipment.
- The homebirth support group has a birthing pool that women can hire for free. A liner will need to be purchased from the 'Good Birth Company'. As above this is the woman's responsibility and can contact the maternity unit to arrange the pool hire.
- Pool hire book is kept in the Styal team draw.
- Prior to using a pool at home a risk assessment should be carried out by the midwife to ensure that should an emergency occur the woman can be removed from the pool.

Training of Staff

- Maternity staff should be aware of the risk assessment undertaken for women using the pool for labour and delivery. See appendix 1
- Midwives should have access to training in the use of water for labour and birth and the Guidelines in place to support practice.
- Two midwives must be present for all pool deliveries to ensure Health and Safety requirements are met and to encourage reflective practice.

BENEFITS OF USING A POOL

- Relaxing, warm and reduces stress (Williams 1994, Belbin 1996)
- Easier to use optimal fetal positions ie squatting
- Allows women to rest and relax more easily between contractions
- Women entering the pool have a shorter labour (Eriksson et al 1997)
- Increased relaxation inhibits the release of adrenaline and Catecholamines and increases the release of endorphins and oxytocin (Odent 1998)
- Increased endorphins increases pain threshold
- Increased oxytocin stimulates contractions (Garland 1996)
- Reduces Blood pressure
- Soft and gentle transition for the baby
- Less Perineal trauma.

This guideline cannot anticipate all possible circumstances and exist only to provide general guidance on clinical management to clinicians.

This guideline has been assessed using the Equality and Human Rights Policy Screening Tool

Audit /Monitoring Compliance of this Guideline

In order to monitor compliance with this guideline, the guideline will be audited in line with the NICE Intrapartum Care Audit Criteria

Minimum Requirements	Evidenced	NICE Standard
Percentage of low risk women in established labour who are offered the opportunity to labour in water for pain relief	Audit of records Standard of 100%	Criterion 4

Frequency

This Guideline for the Use of the Pool during Labour and Delivery will be audited using a minimum of 1% of the health records of low risk women in established labour.

Coordinated by

Practice Development Midwives in accordance with the Women and Children’s Business Unit Audit Plan

Dissemination of Results

Labour Ward Forum Minutes available
Clinical Governance Group within the audit report

Recommendations/Action Plans

Any action plans developed from this audit will be agreed by the maternity unit clinical governance group. There will be a review of progress as a minimum every three months or sooner if there are urgent or high risk issues.

REFERENCES

Alderdice F, Renfew M, Merchant S, Ashurst H, Hughes P, Bellridge G, et al
J Ingleby RM
Jan 2010 Review Dec 2012
Protocols\Waterbirth (updated Jan 2010)

Labour and birth in England and Wales BMJ 1995; 310-837. 1 April

Belbin A (1996) Power and choice in birthgiving : a case study.
British Journal of Midwives, Vol 4 No 3 pp 264-267.

Burns and Kitzinger (2005). *Midwifery guidelines for use of water in labour 2nd edition*.
Oxford: Oxford Brookes University.

Charles C, (1998) Fetal hypothermia, risk from warm water immersion.
British Journal of Midwives, Vol 6 No 3 pp 152-156.

Department of Health. (2004). *National service framework for Children, Young People and Maternity Services Core Standards*. London: Crown Copyright.

Department of Health. (2007). *Maternity Matters: choice, access and continuity of care in a safe service*. London: Crown Copyright.

Eriksson M, Mattsson LA, Landfor L (1997) Early or late bath during the first stage of labour a randomised study of 200 women. *Midwifery*, Vol 13 No 3, Sept 1997, pp 414-416.

East Cheshire NHS Trust Latent, First Second and Third Stage of Labour Guidelines

East Cheshire NHS Trust Antenatal and Intrapartum Management of Group B Streptococcus

East Cheshire NHS Trust Fetal Monitoring Guideline

Garland D (1996) *Waterbirth an attitude to care* Hale books for midwives press.

Hall SM & Holloway IM, (1998). Staying in control: women's experiences of labour in water.
Midwifery. 14 (1) 30-36.

NICE guidelines 2001 NHS National Institute for Clinical Excellence. *The use of electronic Fetal monitoring* (May 2001)

National Institute for Health and Clinical Excellence. (2007). *Intrapartum care*. London: NICE.

NHS Litigation Authority 2009 Clinical Negligence *Scheme for Trusts Clinical Risk Management Standards* Version 2 2009/2010

The Nursing and Midwifery Council,. (2008). *The Code: Standards of conduct, Performance and Ethics for Nurses and Midwives*. London:NMC.

Odent M (1998) *Use of water during labour-updated recommendations* Midirs Vol 8 No 1 pp 68-69.

Smaill F, (2005). Intrapartum antibiotics for Group B streptococcal colonisation. *The Cochrane Database of systematic Reviews* 1996, Issue 1. The Cochrane Collaboration John Wiley & Sons.

Taha M, (2000) *The effects of water on labour: a randomised control trial*: (Doctoral Theses) Rand Afrikaans University South Africa. Cited in Cluett ER, Nikodem VC, Mccandlish RE, Burns EE. (2005). Immersion in water in pregnancy, labour and birth. *The Cochrane*

Database of Systematic Reviews 2004. Issue 1. The Cochrane Collaboration John Wiley & Sons.

Rosevear et al (1993) *Midwifery guidelines for the use of water in labour*
Oxford Brooks Kitzinger, Burn 2000.

Williams Y (1994) But I thought they were braxton hicks *Midwifery Matters* 63 pp 15-17

CRITERIA FOR THE USE OF THE BIRTHING POOL

WOMAN'S INFORMED CHOICE

LOW RISK PREGNANCY

CLEAR LIQUOR

NORMAL TERM PREGNANCY AT 37+ WEEKS

SINGLETON FETUS WITH CEPHALIC PRESENTATION

SROM < 24 HRS

NO SYSTEMATIC SEDATION WITHIN 2 HOURS

ENTONOX MAY BE USED BUT WOMEN NOT TO BE LEFT UNATTENDED

NORMAL OBSERVATIONS THROUGHOUT LABOUR

DISCUSS THE NEED FOR THE WOMAN TO LEAVE THE
POOL IF AN EMERGENCY OR FETAL COMPROMISE OCCURS

Appendix 1 –Equality and Human Rights Policy Screening Tool

<p>Policy Title: <u>GUIDELINES FOR THE USE OF THE POOL DURING LABOUR AND DELIVERY</u></p>	<p>Directorate: Women and Children</p>
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Name of person/s auditing / authoring policy:
M/W J Ingelby

Policy Content:

- For each of the following check whether the policy under consideration is sensitive to people of a different age, ethnicity, gender, disability, religion or belief, and sexual orientation?
- The checklist below will help you to identify any strengths and weaknesses of the policy and to check whether it is compliant with equality legislation.

1. Check for DIRECT discrimination against any minority group of PATIENTS:

Question: Does the policy contain any statements which may disadvantage people from the following groups?		Response		Action required		Resource implication	
		Yes	No	Yes	No	Yes	No
1.0	Age?		x				
1.1	Gender (Male, Female and Transsexual)?		x				
1.2	Learning Difficulties / Disability or Cognitive Impairment?		x				
1.3	Mental Health Need?		x				
1.4	Sensory Impairment?		x				
1.5	Physical Disability?		x				
1.6	Race or Ethnicity?		x				
1.7	Religious Belief?		x				
1.8	Sexual Orientation?		x				

2. Check for DIRECT discrimination against any minority group relating to EMPLOYEES:

Question: Does the policy contain any statements which may disadvantage employees or potential employees from any of the following groups?		Response		Action required		Resource implication	
		Yes	No	Yes	No	Yes	No
2.0	Age?		x				
2.1	Gender (Male, Female and Transsexual)?		x				
2.2	Learning Difficulties / Disability or Cognitive Impairment?		x				
2.3	Mental Health Need?		x				
2.4	Sensory Impairment?		x				
2.5	Physical Disability?		x				

2.6	Race or Ethnicity?		x				
2.7	Religious Belief?		x				
2.8	Sexual Orientation?		x				

TOTAL NUMBER OF ITEMS ANSWERED 'YES' INDICATING DIRECT DISCRIMINATION
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3. Check for INDIRECT discrimination against any minority group of PATIENTS:

Question: Does the policy contain any conditions or requirements which are applied equally to everyone, but disadvantage particular people because they cannot comply due to:	<u>Response</u>		<u>Action required</u>		<u>Resource implication</u>	
	Yes	No	Yes	No	Yes	No
3.0 Age?		x				
3.1 Gender (Male, Female and Transsexual)?		x				
3.2 Learning Difficulties / Disability or Cognitive Impairment?		x				
3.3 Mental Health Need?		x				
3.4 Sensory Impairment?		x				
3.5 Physical Disability?		x				
3.6 Race or Ethnicity?		x				
3.7 Religious, Spiritual belief (including other belief)?		x				
3.8 Sexual Orientation?		x				

4. Check for INDIRECT discrimination against any minority group relating to EMPLOYEES:

Question: Does the policy contain any statements which may disadvantage employees or potential employees from any of the following groups?	<u>Response</u>		<u>Action required</u>		<u>Resource implication</u>	
	Yes	No	Yes	No	Yes	No
4.0 Age?		x				
4.1 Gender (Male, Female and Transsexual)?		x				
4.2 Learning Difficulties / Disability or Cognitive Impairment?		x				
4.3 Mental Health Need?		x				
4.4 Sensory Impairment?		x				
4.5 Physical Disability?		x				
4.6 Race or Ethnicity?		x				
4.7 Religious, Spiritual belief (including other belief)?		x				

Risk Assessment

Appendix C

Assessment of: Emergency evacuation from birthing pool

Assessment date: 26/02/10

Assessor(s): Cheryl Cunningham, Elaine Alston

Date for review:

	Hazard Identified	Person(s) affected	Likelihood	Impact	Risk Rating	Plan/Controls
1	<p>Staff injury</p> <p>Serious injury to staff from muscoskeletal injuries</p> <p>Poor posture adopted</p> <p>Incorrect manual handling used</p> <p>Staff not co-ordinated and don't lift together</p> <p>Staff not skilled due to infrequency of use and lack of training</p>	<p>Staff trust</p>	<p>3</p>	<p>3</p>	<p>9</p>	<p>All staff to practice emergency evacuation during departmental induction and at least annually henceforth. Or more often as needed.</p> <p>All staff to have annual manual handling training</p> <p>Staff to know the manual handling risk assessors within there areas</p> <p>Birthing pool not to be used when staffing levels fall below minimum requirements</p> <p>If life threatening situation leave water in pool and use buoyancy to aid evacuation</p> <p>Designated response staff should be made aware of their role during the procedure, For example staff 1 and 2 insert net, staff 3 to position bed and apply breaks and put at correct height, staff 4 to put out emergency call</p> <p>Lady may need to be rotated whilst in pool so lady's head is evacuated first</p> <p>3 staff to stand on each side of the birthing pool, take hold of the net</p>

J Ingleby RM

Jan 2010 Review Dec 2012

Protocols\Waterbirth (updated Jan 2010)

						One staff member to take the lead, command READY, STEADY, LIFT, adopt good posture and lift lady onto the foot end of the bed
2	Injury of lady using pool Fatality	Woman trust	2	3	6	The Lady should be continually assessed whilst in the birthing pool. In the rare case of a emergency situation, ask the mother to stand up and leave the pool, If the woman has collapsed in the pool follow these guidelines
3	Injury of unborn child Fatality	Unborn child trust	1	3	3	As above
4	Maintenance Hazard of breaks failing or height adjustable mechanism is faulty	Staff trust	2	3	6	Beds should be maintained by estates and faulty beds/ brakes etc to be reported immediately Birthing net has been visually checked prior to use for loose stitching/tears
5	Litigation From staff injury	Staff trust	2	3	6	HSWA 74, Provision of information, instruction , training Provision and maintenance of safe work environment Ensure risk assessments have been completed and adhered to
6	Prosecution	Trust staff	2	3	6	Ensure relevant risk assessments have been completed, equipment is available, staff adhere to trust policy and attend practical and mandatory training

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Approved by(specialist group)
Approved by(specialist group)
Approved by(specialist group)