Ashford and St. Peter's Hospitals NHS
NHS Foundation Trust

WOMEN'S HEALTH AND PAEDIATRICS DIVISION
MATERNITY SERVICES

WATERBIRTH- THE USE OF THE POOL FOR LABOUR AND BIRTH WITHIN THE HOSPITAL AND AT HOME

Amendments			
Date	Page(s)	Comments	Approved by
26/11/04	3	Addition of criteria re: induction of labour under "the woman" following agreement at discussion with Obstetric Consultants on 04/11/04 at Service Development Group	WHCG committee
October 2007		Reviewed no changes	WHCG Committee
April 2014		Whole document review	Supervisors of Midwives
February 2023	Whole document	Whole document review	Perinatal guidelines group

Complied by: Victoria Kirbell, Team Leader Abbey Birth Centre,

Ratified by: Perinatal guidelines group

Date: February 2023

Review Date: February 2026

Target Audience: Midwives working within the Maternity Services

WATERBIRTH- THE USE OF THE POOL FOR LABOUR AND BIRTH WITHIN THE HOSPITAL AND AT HOME

See also;

- **Care in Labour guideline**
- **Abbey Birth Centre Operational Policy and Clinical guideline**
- **Fetal Monitoring guideline**
- **Management of Meconium Stained Liquor guideline**
- **Obstetric Haemorrhage guideline**
- **Shoulder Dystocia**
- **Cord Prolapse**

1. Background

Water increases women's choice of analgesia in labour. It can provide a calm & reassuring environment. In established labour water can enhance uterine activity, provide effective pain relief, reducing the need for an epidural and reduce intervention. Water births can offer a safe and effective non-pharmacological form of analgesia for women with low risk pregnancies and labours. There is no significant difference in adverse maternal/neonatal outcomes when comparing labours in and out of water. Therefore, hydrotherapy or water birth should be offered as a maternal choice, which can improve the experience and reduce the need for anaesthetic.

This guideline covers the care of women who choose to have a water birth in either a hospital or home birth setting.

2. Inclusion Criteria

See also Birth Centre admission criteria

2.1 All women with uncomplicated singleton, cephalic pregnancies at term (37 – 42 weeks) should have the option of labouring in water available to them and should be able to proceed to a water birth if they wish and no anticipated concerns arise in second stage. In an uncomplicated term pregnancy where labour onset is spontaneous, there is no evidence to suggest that there are any increased risks associated with using a pool for delivery of the baby.

2.2 Women who are GBS positive without other risk factors should be supported in their wish to use water. (This does not apply to home births). See GBS guideline.

2.3 BMI of < 35 at booking. Women with booking BMI's > 35 should be seen on an individual basis for discussion regarding their suitability. It is important to establish that they can enter and exit the pool unaided.

2.4 Inductions for postdates/pelvic girdle pain or other non-medical reasons – If the women goes into labour within 24 hours of the induction with Propess and there are no other risk factors providing there is no evidence of hyperstimulation and a risk assessment has been undertaken. Assessment should also include what gestation and reason for induction.

3. Consideration for water birth on Delivery Suite/Birth Centre outside the inclusion criteria

- Women wishing to labour and give birth in the birthing pool outside the inclusion criteria need review on an individual basis. Consideration should be given to the use of waterproof telemetry when these women require fetal heart monitoring.

- Telemetry should not be considered for use on women accessing the birth centre.

- Women choosing VBAC should be referred to the VBAC clinic for full discussion and informed choice re her options and care planning in conjunction with her named Obstetrician.

- Women who require IV Oxytocin infusions as part of the induction/augmentation process may use water for analgesia in labour, providing continuous telemetry CTG monitoring is maintained. FSE should not be used in the pool. **Women must have no other risk factors which would contraindicate the use of water for labour**, therefore risk assessment should be completed and documented on Badgernet prior to entering the pool and continue throughout labour with hourly CTG fresh eyes reviews.

    - Giving sets with extension tubing can be used for more freedom of movement and for the volumetric pumps to be further from the pool. Where able, use the pumps on battery rather than plugged to the mains power supply. The birthing person should avoid submerging the cannula in the water.

- Because of the sedating effect on the mother and fetus, systemic opioids should not be used within 2 hours of entry to the pool.

- Discussion of OASI bundle prior to entering pool. Advise unable to protect perineum in lines with this guideline while in the pool to reduce perineal trauma, although the warmth of the water may aid perineal stretching to reduce tears (Papoutsis et al 2021). Can exit pool for birth if wishes.

4. Care during the First stage of labour

Essentially the care of a labouring woman in the pool is the same as for any other woman and the Care in Labour guideline should be followed. The only additional requirement is the need to monitor the mother's temperature more regularly and the temperature of the water.

4.1 Temperature Checks

- Temperature checks of mother and pool will be recorded prior to entering the pool then hourly and documented on Badgernet.

- In the first stage of labour, the recommended range of temperature is between 34 - 37°C, the water temperature should be dictated by the women's comfort.

- Keep the room temperature between 21-23°C. Room temperature should not be too hot as there is a risk of dehydration or maternal/newborn hyperthermia.

- A rise greater than 1 ºc above maternal base temperature should result in advice to discontinue use of the pool.

- If the mother becomes pyrexial i.e. Temperature 37.5°c or more she should be asked to leave the pool as the baby's temperature will be in the region of 0.5°c to 1°c higher than

the mother's and pyrexia in the mother may lead to tachycardia in the baby. If the mother leaves the pool and her temperature returns to normal, she may re-enter the pool providing there are no concerns about fetal wellbeing.

4.2 Fluids

Women should be encouraged to drink to thirst. Isotonic fluids help reduce the incidence of ketosis / hyponatraemia in labour. Light diet (cereals/ fruit/ yogurt/energy bars) will maintain energy levels.

4.3 Water Depth

- The depth of the water should be up to the mothers' breast when she is in a sitting position. This aids buoyancy and promotes movement, which aids the progress of labour and maternal control. To ensure the full therapeutic effect of the water her fundus should be submerged. The woman should be enabled to move and to explore different positions at any time during the labour and birth.

4.4 Bladder care

Encourage women to pass urine regularly minimum 4 hourly, either leaving the pool or to stand (to catch urine). If the women wish to pass urine in the birthing pool, monitor closely to ensure she is emptying her bladder. If women is required to exit the pool for a vaginal examination, as part of the abdominal examination ensure a bladder is not palpable. See bladder care guideline.

4.5 Other considerations

- The relaxing effect of water can cause labour to slow if the woman remains in the pool for long periods. For this reason, and because of the need to ensure that the woman's bladder does not become too full, advise the woman to leave the pool every 90 minutes to visit the toilet and ambulate for short periods of time e.g.20-30 minutes before returning to the pool.

- The pool should be kept free of faecal contamination, as E coli is a potential source of infection. Single use sieves are available for this purpose.

- If additional pain relief is required, Entonox can be used.

- The midwife does not need to stay in the room all the time if the mother has a birthing partner with her, however someone should remain with her at all times when in the water.

- Birth companions and supporters should be encouraged to be calm, quiet and supportive during water labour/birth. The birth companion may wish to enter the pool to physically and psychologically support the mother if she gives consent**.**

- Aromatherapy oils should not be used directly into the water. If oils used to massage and are still visible on her skin, or less than 30 minutes since applied, they should be encouraged to shower whilst pool fills. If midwife is qualified and undertaken national or local education programme, aromatherapy oils maybe used through diffusers or cotton wool balls (sniffy pots) while in the pool. See aromatherapy guideline.

5. Fetal Monitoring

- The frequency of fetal heart monitoring during the first and second stages of labour should be in line with the Fetal Monitoring guideline and documented on Badgernet.
    - First stage- for one complete minute beginning immediately after the end of a contraction every 15 minutes.
    - Second stage- for one minute after every contraction or every 5 minutes.

- A waterproof sonicaid should be used to auscultate the fetal heart during labour. It may be easier for the midwife to ask the woman to hold the probe on her abdomen once the heart has been located. This can prevent the midwife from becoming unnecessarily wet, and from having to adopt a position that may be either uncomfortable or carry a risk of injury while monitoring the fetal heart.

- If the midwife finds it difficult to monitor the fetal heart, it may be preferable to ask the woman to change position, stand up during auscultation and/or to lift her abdomen out of the water. However, attempts should be made, as far as possible, to auscultate the fetal heart with minimal interruption to the woman. If unable to perform intermittent auscultation in line with guidelines may need to ask the birthing person to exit the pool, and consider transfer to labour ward if in the birth centre.

6. Second Stage of labour

- In the second stage of labour, the water temperature should be 37 – 37.5 °c

- The woman should be encouraged to listen to her body during the pushing phase. By allowing the mother to push spontaneously, the risk of an imbalance between oxygen and carbon dioxide in the maternal/fetal circulations is reduced. It is also less likely to exhaust her and her baby. There is some evidence that non-directive pushing reduces perineal trauma. Document rationale for directive pushing in notes (Garland 2017a).

7. Birth in water

- Increase pool temperature to 37°-37.5°c

- The midwife should again check that there is an adequate supply of towels and other linen in case the woman needs to exit the pool quickly. Failure to ensure that the woman is adequately warm can lead to delay during the third stage of labour (Odent 1998).

- Two midwives should attend the birth; the attending midwife can use the call bell to request assistance from a second midwife.

- For the birth, a method of “hands off” should be practised having hands poised to help bring the baby to the surface. This will minimize the stimulation to the emerging baby. Traditional control of the head during crowning is unnecessary (Garland 2017).

- The actual birth should be, whenever possible, ‘hands off’. In a pool birth the objective is to minimise any stimulation of the baby whilst underwater (Johnson 1996) although

many women will spontaneously touch their own baby. The midwife must use her clinical judgement to decide whether it is necessary to assist in delivering the anterior shoulder

- It is not necessary to palpate for the presence of the umbilical cord once the baby's head delivers. It can be loosened and disentangled as the baby is born. To minimize the risk of cord snapping avoid undue traction on it as the baby's head surfaces from the water.

- The baby should be born completely underwater. The baby should be born completely underwater, with no contact with the air until the baby is brought to the surface. This reduces the likelihood of premature breathing (Johnson, 1996).The baby is then brought immediately, gently, to the surface taking into consideration the length and position of the cord to avoid the cord snapping (Gilbert and Tookey, 1999). If cord snapping does occur, this should be clamped promptly and recorded in the notes. If appropriate, neonatal staff should be called to assess the baby.

- Following the birth of the baby, consider resting baby's head above the water, with the baby's body still in the water to prevent hypothermia or cord rupture. Once the baby's head has come out of the water, it must not be submerged again.

- Unless a serious anomaly which requires immediate intervention is apparent, all babies born in water should stay in their mother's arms for at least one minute with no efforts made to interfere with or cut the cord. This will facilitate the baby's transition to the external environment and enable the normalisation of fetal blood volume.

- After one minute, the first APGAR score should be recorded which would be used to evaluate the need for resuscitation. Babies born in water are often more relaxed than babies born in air, which can lead to a slightly lower APGAR scores at 1 and 5 minutes. Babies born in water may have a slower adaptation to the external environment; it may take them up to a minute to initiate respiration, they may not cry vigorously even after respiration is established and they may take longer to achieve the same skin colour as babies born in air. Gentle stimulation should assist breathing.

- Should further evaluation of baby's condition or neonatal resuscitation be required, the woman should be informed and the cord clamped and cut.

8. Third stage of labour

- The method chosen to deliver the placenta and membranes must be based on the woman's wishes and the midwife's risk assessment. However, active management of the third stage **MUST NOT** be undertaken in the pool.

- An intramuscular injection requires a dry area of skin, thus should be administered after exit from the pool.

- If the mother is having an active third stage, Mother is asked to leave the pool after 1-3 minutes of optimal cord clamping. Syntometrine is given and management is carried out once mother is out of the pool.
    - **The pool should not be drained before the mother exits the pool**

- It is not possible to accurately measure blood loss; it is up to the midwife to make a clinical decision by looking at the water. Blood loss in the pool can be expressed as > or < 500mls. (See guide in appendix one).

- If the mother is having a physiological 3rd stage, it is possible to leave the cord to stop pulsating in line with optimal cord clamping (WHO 2012 NICE 2014) with either the option to deliver completely attached in the water or clamp and cut once pulsation ceases and continue in water or dry land. If the mother wishes lotus birthing this should be discussed antenatally, documented in her notes and written in birth preferences.

- Rhesus bloods can be collected in any third stage management and should be discussed with mother how this will be achieved. The midwives skills and knowledge of physiological third stage is paramount.

- Suturing of perineal tears should be delayed for a least 1 hour to allow for for any oedematous tissue to settle **providing the perineal wound is not actively bleeding.**

- There is no evidence that water labour/birth affects the baby's microbiome (Harman et al 2017).

9. Complications in the Pool Environment

In the rare case of an emergency, the mother must be advised to stand up and leave the pool immediately.

As when caring for any woman, the midwife is responsible for using her clinical judgement in responding appropriately to problems that may occur, and for documenting all events and her actions in response to those events.

9.1 Bleeding - ante/postpartum -irrespective of cause

- If more than a "show" – ask the mother to stand up and leave the pool.
- Follow the Obstetric Haemorrhage guideline

9.2 Shoulder dystocia

- Call for assistance using the emergency bell
- Follow the Shoulder Dystocia guideline
- The mother should be assisted to either adopt a deep squat position, or raise one leg onto the side of the pool, this should release the shoulder. If this does not work immediately the mother must leave the pool supported by two people.
- The midwife must be prepared for birth as the action of stepping out of the pool may dis-impact the shoulder and the baby may deliver rapidly. Ensure baby's head is supported as you move to the bean bag/floor mat and adopt McRoberts' position. Follow shoulder dystocia guidelines.

9.3 Meconium stained liquor.

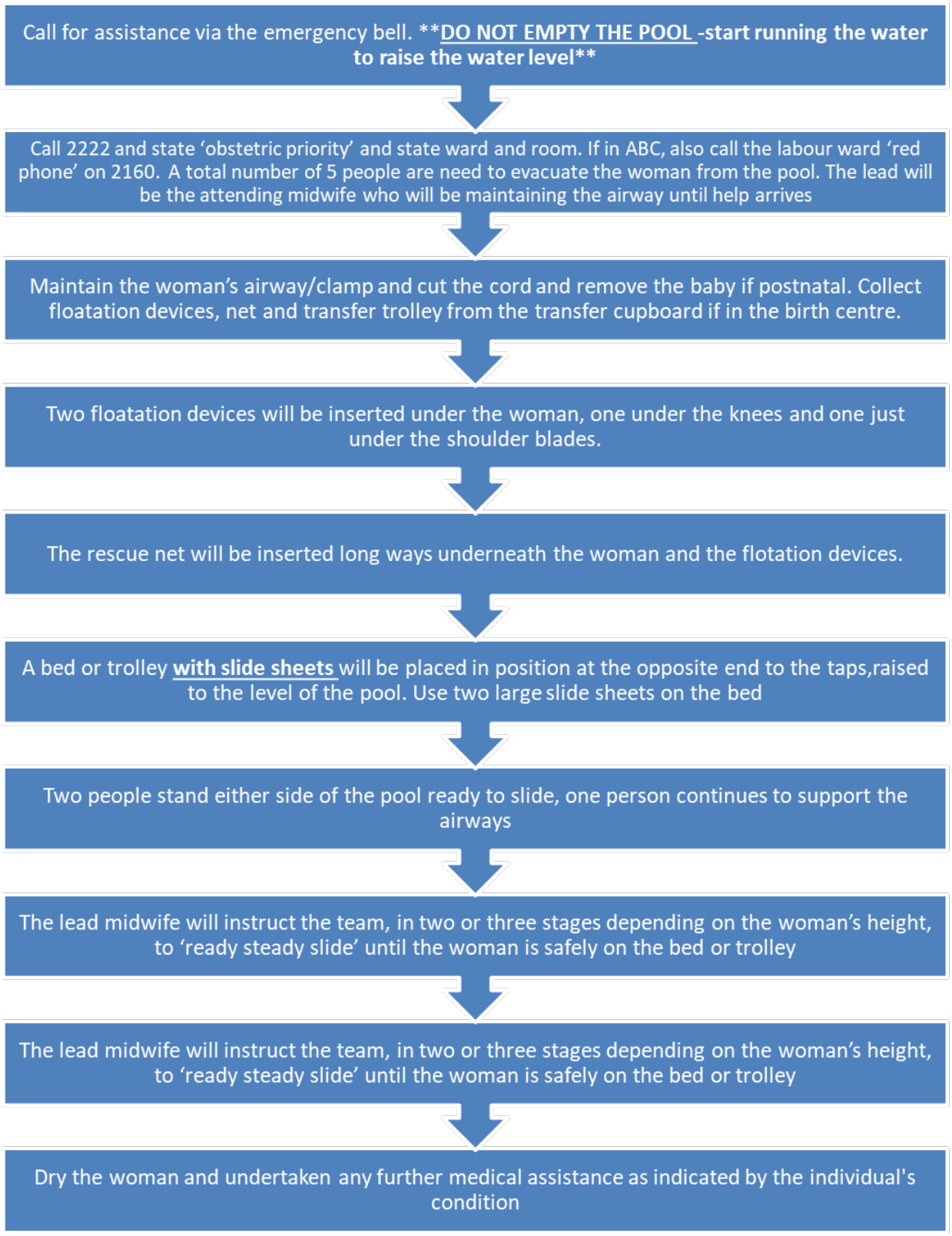
- If meconium is seen/ suspected during labour at any point before the delivery of the head, the mother should be asked to leave the pool as a compromised baby is more likely to gasp underwater
- Unless birth is imminent, transfer to labour ward.
- Follow the Management of Meconium Stained Liquor guideline

9.4 Snapped cord

- Very occasionally, midwives have discovered that the cord has snapped during birth, but that they have not noticed this immediately (Gilbert and Tookey 1999, Cro and Preston 2002). Once the baby has been brought to the surface of the water, the midwife must check that the cord is intact. If the cord has snapped, she must take appropriate action and monitor the baby's condition.
- The cord is more likely to snap where the level of the water is deep, as the cord will be stretched when the baby is brought to the surface. This can be prevented by checking that the water is at an appropriate level at the onset of second stage.

9.5 Maternal collapse - Emergency evacuation of a woman from the pool

In the event of an emergency where a midwife needs to evacuate a woman from the pool the following procedure will apply:


Call for assistance via the emergency bell. **DO NOT EMPTY THE POOL -start running the water to raise the water level**
Call 2222 and state 'obstetric priority' and state ward and room. If in ABC, also call the labour ward 'red phone' on 2160. A total number of 5 people are need to evacuate the woman from the pool. The lead will be the attending midwife who will be maintaining the airway until help arrives
Maintain the woman's airway/clamp and cut the cord and remove the baby if postnatal. Collect floatation devices, net and transfer trolley from the transfer cupboard if in the birth centre.
Two floatation devices will be inserted under the woman, one under the knees and one just under the shoulder blades.
The rescue net will be inserted long ways underneath the woman and the flotation devices.
A bed or trolley with slide sheets will be placed in position at the opposite end to the taps,raised to the level of the pool. Use two large slide sheets on the bed
Two people stand either side of the pool ready to slide, one person continues to support the airways
The lead midwife will instruct the team, in two or three stages depending on the woman's height, to 'ready steady slide' until the woman is safely on the bed or trolley
The lead midwife will instruct the team, in two or three stages depending on the woman's height, to 'ready steady slide' until the woman is safely on the bed or trolley
Dry the woman and undertaken any further medical assistance as indicated by the individual's condition

12. Cleaning the pool

- Ensure adequate ventilation ie. Open the window or door
- Apply Personal Protective Equipment (PPE) – disposable gloves, plastic apron and a face mask
- After use clear all debris from the pool prior to cleaning using a disposable single use sieve and discard the sieve after each use. Rinse using the showerhead.
- The pool must then be cleaned with hot water and a non-abrasive general purpose neutral detergent (e.g. Hospec) to clean the pool of any further debris. Use a disposable cloth for the easy to reach areas, and a clean mop and head for the rest to protect your back. Ensure under the rim of the pool is cleaned and the outside. Pay particular attention to the drainage outlet.
- Rinse well with hot water.
- Ensure the pool tap outlet is turned to "closed" prior to cleaning the pool tap and pool area with the Actichlor chlorine releasing disinfectant tablets with detergent (1 tablet to 1 litre of water-labelled bottles for use in birth centre sluice). Clean the pool tap first prior to cleaning the pool with the Actichlor solution.
- When cleaning the pool itself, pour the Actichlor solution around the side of the pool. Using a clean disposable cloth or clean mop head to clean the surfaces of the pool.
- Leave the solution in the pool for 10 minutes.
- Open the tap outlet and empty the pool of the Actichlor solution.
- The pool should then be rinsed with cold water using the shower to prevent any residue being left on the pool surface.
- Dispose of cloths and mop heads in yellow clinical waste bags.
- The drainage system should be kept closed when not in use.
- Remove PPE and wash and dry hands

➢ To clean the pool mirror, wash and rinse in warm water. Then soak for a minimum of 10 minutes in Actichlor solution. After this, rinse and dry the equipment.

***** *Prior to each use and every 24 hours (to coincide with the daily pool cleaning), the pool taps need to be run for 2 minutes**

Appendix one

Photos of pool blood loss estimations

200mls

300-400mls

500-600mls

13. Monitoring

Compliance with this guideline will be monitored as detailed in the table below. Where deficiencies are identified action plans will be developed and changes implemented and disseminated as required.

Element to be monitored	Lead	Tool	Frequency	Reporting arrangement	Acting on recommendations and Lead(s)	Change in practice and lessons to be shared
Women in established labour at term, on LW or in Birth Centre which as a minimum must include: a. Risk assessment to use pool for labour and/or birth b. Stage of labour on entry to the pool c. Maternal & Fetal observations carried out prior to using the pool d. Maternal and Fetal observations carried out during first and second stage of labour e. Hourly water temperature f. Documentation of all of the above g. Pool used for analgesia and/or birth h. Appropriate reason for exit from the pool if appropriate		Review all health records of women using the Birth Centre 1% of all notes of women using pool on LW	Monthly yearly			• Feedback bulletin • Bonus days • Quality and Safety Half days • staff meetings • any other meeting as appropriate • Individual feedback as appropriate One or all of the above

4. References

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EQUALITY IMPACT ASSESSMENT TOOL

Name : WATERBIRTH; THE USE OF THE POOL FOR LABOUR AND BIRTH
Policy/Service: Women's Health Directorate

Background • Description of the aims of the policy • Context in which the policy operates • Who was involved in the Equality Impact Assessment
• To ensure consistent high standard of evidence base care in labour provided. • Women's Health Guideline Group
Methodology • A brief account of how the likely effects of the policy was assessed (to include race and ethnic origin, disability, gender, culture, religion or belief, sexual orientation, age) • The data sources and any other information used • The consultation that was carried out (who, why and how?)
Policy widely circulated for comments within the Multidisciplinary Maternity Team.
Key Findings • Describe the results of the assessment • Identify if there is adverse or a potentially adverse impacts for any equalities groups
Accepted and understand the relevance of high standards of evidence based practice.
Conclusion • Provide a summary of the overall conclusions
Principles of equality have been adhered to.
Recommendations • State recommended changes to the proposed policy as a result of the impact assessment • Where it has not been possible to amend the policy, provide the detail of any actions that have been identified • Describe the plans for reviewing the assessment
Improvement and consistency of care provision.

Guidance on Equalities Groups

Race and Ethnic origin (includes gypsies and travellers) (consider communication, access to information on services and employment, and ease of access to services and employment)	**Religion or belief** (include dress, individual care needs, family relationships, dietary requirements and spiritual needs for consideration)
Disability (consider communication issues, access to employment and services, whether individual care needs are being met and whether the policy promotes the involvement of disabled people)	**Sexual orientation including lesbian, gay and bisexual people** (consider whether the policy/service promotes a culture of openness and takes account of individual needs
Gender (consider care needs and employment issues, identify and remove or justify terms which are gender specific)	**Age** (consider any barriers to accessing services or employment, identify and remove or justify terms which could be ageist, for example, using titles of senior or junior)
Culture (consider dietary requirements, family relationships and individual care needs)	**Social class** (consider ability to access services and information, for example, is information provided in plain English?)

If further assessment is required please see the Integrated Single Equality Scheme.

For advice in respect of answering the above questions, please contact, HR Manager, on extension 2552.