Bedfordshire Hospitals
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CLINICAL PROCEDURAL DOCUMENTS

Document Title: Water Labour and Birth Guideline

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	CG 259 Use of Maternity Early Obstetric Warning Scoring Chart CG 130 Management of Women with a Previous Lower Segment Section or other Uterine Scar M35 Choice of Place of Birth CG287 Midwifery Led Birthing Unit CG489T Intermittent Auscultation
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Water Labour and Birth Guideline

Introduction

The use of hydrotherapy was mentioned in a French journal in 1804 as a method of pain relief was first pioneered by Michel Odent in the 1970s, however it has been reported that women have given birth in water as long ago as ancient Egypt. This guideline has been developed to support midwives caring for women who have the choice to use water for labour and/or birth. Numerous research studies have demonstrated the safety and effectiveness of water and the opportunity to labour in water is recommended as an effective form of pain relief and supported within the NICE Intrapartum Care Guidelines. This local guideline uses current evidence based guidance endorsed by the RCM 2018, and the joint position statement from the RCM and RCOG which support labouring in water for healthy women with uncomplicated pregnancies. Women should feel supported to make well informed decisions through a relationship of mutual trust with health professionals and their choices should be acted upon (Better Births National Maternity Review 2016).

Aims

- To provide a safe environment for women who use a water pool for labour and/or birth.
- To facilitate and encourage the natural process of labour.
- To support and facilitate choice on pain relief options for women in labour within a safe environment
- To provide evidence based guidance for midwives.

Objectives

- To enable women to have the choice of use of water for pain relief and labour in-line with National and professional recommendations.
- To monitor the progress of labour and birth in water in accordance with this guideline to promote safe outcome for mother and baby.
- To provide the midwives with an understanding of the issues surrounding the care of woman who choose to labour and/or birth in water.
- To enable midwives to promote a safe birthing environment for women who choose to use water in labour.
- To support midwives to maintain accurate, contemporaneous records.
- To set auditable standards for pool use in labour and birth.

Process- Inclusion and Exclusion Criteria

The options for the use of water using a birth pool for labour and/or birth is available in the Delivery Suite, the Midwife Led Birth Unit (MLBU), Acorn Suite at Bedford and at the women's home. In order to ensure safety, the following inclusion and exclusion criteria are set out. These are to be used as a guide. As there is limited evidence for the outcomes of mother and babies who use a birth pool on a Consultant Unit, a documented risk assessment for the suitability to use the birth pool must also be completed in the birth notes at the Birth Options Clinic or on admission. Women must be informed of the availability of facilities for labouring and/or giving birth in water in the antenatal period. Further discussion may be required with the Consultant Midwife, Coordinator and or Obstetric Team.

Criteria for women using a birth pool on the MLBU (Luton) /Acorn Suite (Bedford) and Home birth

Inclusion

Women who meet the low risk criteria for a MLBU/Acorn Suite/home birth who are 37-41+6 weeks gestation. All women meeting the low risk criteria and attending the unit in labour should be offered the use of water and a water birth. A decision can be made in labour.

Inclusion Criteria.

- Eligible for midwifery led care
- Women defined as Amber pathway at Luton and Dunstable (M35 Choice of Place of Birth) who have been assessed as suitable for water birth on Delivery Suite, and have been assessed by either a senior obstetrician or Consultant Midwife and have a documented plan that they are suitable to birth on the MLBU
- Singleton pregnancy
- 37 – 41+6 weeks of pregnancy
- Cephalic presentation
- Spontaneous onset of labour or uncomplicated IOL in accordance with MLBU/Acorn Suite criteria
- Fetal wellbeing has been assessed in accordance with NICE Intrapartum Care for healthy women and babies 2017
- Less than 24 hours spontaneous rupture of membranes (SROM) before labour commenced
- If SROM - Clear liquor
- No administration of opiates within 2 hours of entering the pool
- ≤BMI 35 at onset of labour for primiparous women or BMI up to 40 for multiparous women with no other comorbidities after appropriate risk assessment proforma has been completed (Appendix 6)
- HIV with undetectable viral load
- GBS Positive (IV access with waterproof covering and positions explained)
- Pre labour haemoglobin >9.0 g/dl

Exclusion Criteria

- Prolonged rupture of membranes – women may not continue to labour and deliver in water if established labour has not commenced within 24 hours of spontaneous rupture of membranes
- Women who are in the Red Criteria (M35 Choice of Place of Birth)
- Women with maternal observations which are not within normal limits
- Women with active genital herpes
- Hepatitis B (active or inactive)
- Parity > 5
- Covid-19

Most women who labour or give birth in a birth pool will be low risk, and meet the criteria for birth on a Midwife Led Unit (see criteria for use of birth pool on a Consultant Unit).
Birth Options Clinic will review women who do not meet the criteria for an MLBU/Acorn Suite/home birth but continue to request a water birth on MLBU/Acorn Suite or at home so that a multidisciplinary plan can be put in place (Choice of Place of Birth Guideline). However, as women who are requesting use of a birth pool but who do not meet the criteria for the MLBU/Acorn Suite can use the birth pool on the Consultant Unit. This option must be arranged for women falling outside the criteria for birth on a Midwife Led Unit - a full discussion of this choice must take place including the risk factors that require the woman to leave the pool as per the safety briefing, which must be documented in the Delivery Record.

Criteria for Women using a birth pool at Homebirths (Home water birth) - Midwife Led Care

The Birthing Pool in the home environment

A regular sized inflatable pool will weigh between 730 -770kg when filled which is as heavy as 10 – 13 adults. It is the woman's responsibility to ensure that she is confident that this will not cause any problems structurally. In a house it may be best to recommend that the pool be used in a downstairs room. In a flat / apartment, the woman should be encouraged to take appropriate advice. Women should be informed that with large quantities of water there is the potential for damage within the property. See Appendix 4 and 5.

Inclusion Criteria.

Women who choose to use a birth pool at home will usually meet the low risk criteria for birth at home. However, women who do not meet the criteria will be referred to the Birth Options Clinic where further referral and liaison will take place with the Professional Midwifery Advocate (Luton) or Consultant Midwife and/or Multidisciplinary Team as required in the antenatal period (Choice of Place of Birth Guideline). The inclusion criteria would therefore normally include:

- Eligible for midwifery led care (see CG114 Care of Women in Labour Guideline/Bedford)
- Singleton pregnancy
- 37 – 41+6 weeks of pregnancy
- Cephalic presentation
- Spontaneous onset of labour or uncomplicated IOL in accordance with MLBU/Acorn Suite criteria
- Fetal wellbeing has been assessed in accordance with NICE Intrapartum Care Guidelines 2017
- Less than 24 hours spontaneous rupture of membranes (SROM) before labour commenced
- If SROM- Clear liquor

- No administration of opiates within 2 hours of entering the pool (NICE 2014)
- ≤BMI 35 at onset of labour for primiparous women or BMI up to 40 for multiparous women with no other comorbidities after appropriate risk assessment proforma has been completed (Appendix 6)

Women interested in using a birth pool, at home will be given advice about water birth including a Patient Information Leaflet and should be advised not to enter the birthing pool prior to the arrival of the midwife.

The Home Birth Risk Assessment (Appendix 5) ideally will be completed once the birth pool has been delivered to the woman's home (at around 36 weeks), and should be signed by both the midwife and the woman and a copy filed within the hospital notes.

Women choosing a home water birth will be advised of the following NHS/Patient Safety Alert (Alert Reference NHS/PSA/D/2014/011). This is only specific to a particular pool where the alert is to highlight the importance of women not labouring or giving birth in a birthing pool which has been filled prior to the onset of labour and where the temperature has been maintained by use of a heater and pump.

It is essential to note that this alert does NOT refer to birthing pools of any type which are filled from domestic hot water systems at the time of labour.

Pumps of any type should be used solely for pool emptying and not for recirculation and are single use only.

Criteria for Women using the Birth pool on the Delivery Suite (Consultant Led Unit)

An individualised assessment will be made on a case by case basis for the inclusion or exclusion for women who request the use of the pool on the Delivery Suite. This can either be arranged in the antenatal period for women who are receiving Consultant Led Care in the antenatal period when they attend their appointments with their named Consultant Obstetrician, or can be decided when the women is in labour and has been admitted for care in labour on the Labour Ward (Consultant Unit) by the Obstetric Consultant on duty. The birth pool is therefore reserved for women who require labour care on a Consultant Unit and who have been deemed to meet the inclusion criteria for use as confirmed by the Obstetric Consultant. Women who meet the low risk criteria for labour on our MLBU/Acorn Suite will be advised of the available birth pools there and will either be admitted directly to MLBU/Acorn Suite or a transfer of care will be arranged.

For all cases of women being accepted for use of the birth pool on the Consultant Unit, suitable fetal monitoring must be used, with Telemetry and continuous Electronic Fetal Monitoring being offered and any CTG concerns should result in the woman exciting the pool immediately. Should the woman decline continuous monitoring (making an informed decision) her wishes should be respected and her decision should be documented in the maternity record, however appropriate escalation (Senior Delivery Suite Midwife should be carried out).

Women who may wish to use the birth pool will be given the Water Birth Patient Information leaflet in order to make an informed choice dependent on her individual risk factor and inclusion/exclusion criteria.
Although women will be assessed on an individual basis, and the decision made by the Obstetric Consultant, the following criteria for birth pool use on the Consultant Unit provides a guide for risk assessment:

Inclusion Criteria.

- 37-41+6 weeks singleton fetus with cephalic presentation
- IOL for post-dates with propess
- BMI ≤35 for primiparous or ≤40 for multiparous women (with fetal growth within 10-90th centile on USS) at onset of labour
- Growth of >90th centile, but below 95th centile for 1st stage analgesia only
- Previous history of shoulder dystocia for 1st stage analgesia only
- VBAC (option for IV access with waterproof covering and positions explained). Should the woman make an informed decision to decline a cannula her wishes should be respected and her decision should be documented in the maternity record
- Women with diet controlled gestational diabetes, stable blood sugars and spontaneous onset of labour fall into the Amber Pathway at Luton or Risk Assessed (see Appendix 6) include at Bedford) (M35 Choice of Place of Birth) and so fulfil the criteria for a water birth after obstetric review
- GBS Positive (IV access with waterproof covering and positions explained)
- HIV with undetectable viral load

Suitable for Delivery Suite or MLBU under AMBER criteria Luton or Risk Assessment at Bedford (see Appendix 6).

- Previous retained placenta (IV access recommended, with waterproof covering and positions explained)
- Previous PPH (less than 1000mls – IV access recommended, with waterproof covering and positions explained)
- Previous third degree tear (labour and birth, after full discussion and offer of land birth with OASI technique if prefers)
- Previous operative vaginal delivery
- ≤BMI 35 at onset of labour for primiparous women or BMI up to 40 for multiparous women with no other comorbidities after appropriate risk assessment proforma has been completed (Appendix 6)

Exclusion Criteria.

- Inability to adequately monitor the fetal heart or abnormal fetal monitoring in labour. This includes inability intermittent auscultation, if this was the woman's choice.
- Growth >95th centile.
- Known SGA <10th centile

- Preterm
- Non-cephalic presentation
- Meconium liquor
- PROM (PROM more than 24hrs before onset of labour)
- Maternal infection (except GBS)
- Known maternal disease that may result in syncope/fit/episodes of loss of consciousness
- Significant antepartum haemorrhage
- Women with maternal observations which are not within normal limits when documented on the MEOWS chart.
- Women with active genital herpes, known hepatitis or HIV positive with detectable viral load

Sticker Tool for Use for Waterbirth with High Risk Women (either antenatally or on admission)

Water birth for women with risk factors pathway **Date:**	Consultant
Risk factors in pregnancy	
Risk factors in labour	
Fetal monitoring in labour	Telemetry CTG Yes/No Intermittent auscultation Yes/NO
Labour in Pool	Yes/No
Birth in pool	Yes/No
Venflon required	Yes/No
3rd stage	Active/ Physiological
Reasons for exiting pool discussed	Yes/No
Signature of Reviewing Senior Midwife/Obstetrician	

Dilatation before entry to pool

Hydrotherapy is beneficial at any stage of labour including the latent phase, this does not have to be confirmed by vaginal examination. Women should not be denied the use of water as pain relief, however, the RCM recommend mobilising in early labour. If early labour stops or slows after immersion in the pool, the woman can be encouraged to leave and re-enter once labour becomes re- established.

Availability of Pool Birth

Women should be informed by the midwife, that labour and /or birth in the pool is dependent on:

- Availability of the pool on first come first served basis

Care of the woman during labour and birth

An initial intrapartum risk assessment of the woman should take place, by the midwife, prior to immersion in pool. This must include the following:

- If using the pool on Consultant Unit that the Consultant Obstetrician has risk assessed, either during the antenatal period or on admission and has confirmed and documented suitability and that a plan is in place (i.e. for use as hydrotherapy only or water birth). If this conversation has taken place antenatally the prior decision should be respected unless a new risk factor has presented
- The woman meets the inclusion criteria or have been assessed as suitable for its use
- The maternal temperature, pulse and blood pressure are within normal range
- The fetal heart rate is normal on auscultation
- An abdominal palpation is undertaken
- Ideally, established labour should be confirmed before a woman enters the pool, however a vaginal examination should not be a pre-requisite to entering the pool, as hydrotherapy can be beneficial in latent phase and women may decline examination.
- It is considered best practice to perform a vaginal examination out of the pool, to facilitate an accurate vaginal assessment and from a moving and handling perspective.
- A discussion with the woman to reinforce the antenatal discussion regarding exit from the pool. This discussion must include the criteria for exiting the pool and the critical language that will be used to initiate exit from the pool. Completion of the appropriate documentation.

Example "I need you to leave the pool now".

In both community and hospital setting the co-ordinating midwife on Delivery Suite should be informed of the woman entering the pool.

The midwife **must not leave** the woman unattended once she enters the birthing pool.

Criteria for Leaving the Pool

- Maternal observations outside of normal parameters (see CG287 Midwifery Led Birthing Unit
- Any meconium
- Delay in first or second stage of labour (CG114 Care of the Woman in Labour Guideline)
- Intrapartum haemorrhage
- Detection of fetal heart rate abnormality on auscultation
- Retained placenta
- If birth not imminent within 4 hours of entering pool, for assessment of progress (unless declined by the woman in which case this must be documented in the maternity record)
- Maternal request for further analgesia

- Any deviation from CG114 Care of Woman in Labour Guideline

This is not an exhaustive list: it is essential that on-going risk assessment of the woman and fetus in labour/birth is undertaken.

Maternal and fetal observations to be carried out by the midwife in the first stage of labour when in the pool

OBSERVATION	FREQUENCY
Maternal Pulse	Every Hour
Maternal Temperature	Every Hour
Maternal blood pressure	Every 4 Hours
Contractions By abdominal palpation for length, strength, frequency and resting tone	Every 30 minutes
Fetal Heart	Every 15 minutes for 1 minute after a contraction, then every 5 minutes for a full minute after a contraction in the second stage.

The water temperature should be comfortable for the woman and reflect the woman's normal temperature (Charles 1998).

This should ideally range between **35°C – 37°C** and should be checked prior to the woman entering the pool. The woman's own body temperature should be checked (maternal pulse is checked hourly), and water temperature should ideally match the woman's.

The pool temperature must not exceed 37.5°C

The pool should be filled to the level of the woman's breasts as this increases buoyancy, thereby promoting movement and facilitating progress in labour

The pool should be kept clear of debris, using a sieve, to allow observation of the colour of any liquor.

The room temperature should be comfortably warm and draught free in order to prevent rapid cooling in the wet mum and baby. Description of room temperature should be documented in the maternity record hourly by the midwife.

Maternal and fetal observations by the midwife in the second stage of labour when in the pool

OBSERVATION	FREQUENCY
Maternal Pulse	Every Hour
Maternal Temperature	Every Hour
Maternal blood pressure	Every Hour
Contractions By abdominal palpation for length, strength, frequency and resting tone	Every 30 minutes
Fetal Heart	Every 5 minutes for 1 minute after a contraction

Analgesia
Entonox may be used whilst in the pool if the woman wishes. It is safe to use entonox in water providing the woman is not left unattended. If further analgesia is required the woman must leave the pool.

Birth of baby
Two registered midwives must always be present at birth. In a home setting, two midwives should be present for labour and the birth.

The midwife should support maternal spontaneous pushing (active /directed pushing is **not** advocated).

The midwife should adopt a 'hands off' approach throughout the second stage of labour and the birth.

Do not touch the emerging fetal head during birth (this may stimulate the respiratory centre and cause gasping whilst underwater).

Do not feel for presence of the umbilical cord around the fetal neck.

As soon as baby is born, the midwife (or the midwife may supervise the woman or her partner) to gently bring the baby to the surface of the water, face first and place on the mother's abdomen, avoiding undue traction on the umbilical cord to minimise the possibility of cord rupture. It is advisable that midwives visually (and if necessary, manually) check that the cord is intact. If the cord is found to be snapped, appropriate action should be taken and the baby's condition monitored.

Following a normal birth underwater the baby should remain immersed in water from the trunk downwards to prevent excessive heat loss.

If a delay in spontaneous birth of the fetal body is identified (i.e. does not occur with the next contraction and / or following restitution of the head) The midwife must assist the women to leave the pool and be fully assessed for shoulder dystocia see guidance on managing emergency procedures below:

IF BIRTH OCCURS AS THE WOMAN EXITS THE POOL, THE BABY MUST NOT BE RE-SUBMERGED IN THE WATER. THE BABY MUST BE BORN COMPLETELY UNDERWATER OR COMPLETELY IN AIR

Care of the woman during the third stage of labour

If the woman has made an informed request for a physiological 3rd stage of labour, this can be conducted either in or out of the pool. If this exceeds one hour in length referral must be made to the obstetric team.

Active management of third stage must be conducted out of the pool.

Estimated blood loss should be documented as “less than 500mls” or “greater than 500mls”. If blood loss is estimated as greater than 500mls, attempts should be made to quantify the amount in order that appropriate post-partum haemorrhage management occurs in accordance with local guidelines. General guidance is that if a woman’s thighs are visible in the water, the blood loss can be estimated as <500 mls.

If the blood loss exceeds a normal volume and the mother is symptomatic the emergency bell should be pulled, or ambulance called if at home, and the woman should be asked to leave the pool and an appropriate number of maternal supporters should be in place. Due to the nature of blood coagulation, clots are often evident at the bottom of the pool and can be measured if the midwife is unable to estimate blood loss or there are additional concerns.

Care of the Perineum

Inspection and repair of the perineum should be avoided for one hour following exit from the pool due to water saturation of the tissues, unless active/heavy bleeding is noted from the vagina.

Emergency risk reduction and procedures

Continuous risk assessment of the woman during water labour and birth by the midwife is vital, in order to reduce the occurrence of an obstetric emergency in the pool.

See Appendix 1 “Emergency Evacuation of Pool”

Shoulder Dystocia

If shoulder dystocia is identified the midwife should:

- Pull the emergency bell to summon help/dial 999 and call for an ambulance. Provide an SBAR
- Assist the woman out of pool to a dry, firm surface and action as directed in the shoulder dystocia guideline
- If the woman is unable to exit the pool, undertake an emergency evacuation as per Appendix 1 “Emergency Evacuation From Pool”

NB: In many cases, when the woman lifts one of her legs to get out of the pool, the movement of the pelvis will enable birth to occur spontaneously. Should this occur, it is advisable that one midwife is available to deliver the baby, while the second midwife plus other available personnel assist the woman out of the pool. In this event, it is a matter of maternal choice whether to continue to exit the pool or step back in again following the baby's birth completely in air.

Post-Partum Haemorrhage
In the event of post-partum haemorrhage the midwife should:

- Pull the emergency bell to summon help/dial 999 for ambulance and inform Delivery Suite co-ordinator
- Clamp and cut the umbilical cord
- Assist the woman and baby out of the pool to a dry, firm surface and action start PPH algorithm as per Trust guidance.
- If the woman is unable to exit the pool, undertake an emergency evacuation (see Appendix 4 for local Emergency Evacuation from Pool Guidance including Community setting).

If the woman refuses to leave the pool in the following settings:
Hospital Setting

- The midwife should continue to encourage her to leave the pool.
- The midwife should repeat verbally the reason that exit from the pool is necessary.
- The second midwife should not leave the room.
- The emergency bell should be activated to ensure obstetric and Delivery Suite co-ordinator support.

Community setting

- The midwife should continue to encourage her to leave the pool.
- The midwife should repeat verbally the reason that exit from the pool is necessary.
- The second midwife must not leave the poolside.
- Summon the assistance of a paramedic ambulance.
- Contact the senior midwife bleep holder 550 Luton, 728 Bedford, via the hospital switchboard.
- If further support/guidance needed contact the midwifery manager on-call via switchboard.

In both the hospital and community setting, the actions taken by the midwife must be documented clearly in the maternity record. This must include all advice given to the woman, the woman's response and all actions taken.

Role and Responsibilities of the Midwife
It is the responsibility of the midwife to ensure that she has acquired the necessary skills and knowledge to care for a woman during labour/birth in the pool. The NMC states that midwives should not undertake a procedure which is unfamiliar to them.

It is essential that all midwives:

- Are proactive in seeking opportunities to become confident in facilitating water births. This will be discussed at Appraisal. The Education Team can assist with training where necessary.

- Have an understanding of how to prepare the environment and equipment for pool use as per checklist. (Appendix 2).
- Attend mandatory skills and drills training annually.

and ideally

- Attend a water birth study day or in service water birth update provided at normality study day, and/or mandatory update at Bedford or obstetric study day at Luton and Dunstable.

Record Keeping

Accurate contemporaneous records should be maintained by the midwife as stipulated by the NMC. All observations and details of progress in labour should be documented the maternity records, including the partogram.

Pool Flushing

- Tap flushing is required to reduce the risk of microbial contaminants in the water used to fill the pool.
- A member of the midwifery team/maternity support worker (MSW) must ensure that the birthing pool taps are run at their hottest setting for two minutes on a daily basis and before each use of the pool.
- Outlets should be run at a maximum flow rate and hot taps must be run at their hottest setting without over-riding any pre-set controls.
- Flushing must be recorded on the flushing log (see appendix 7 below).
- Monthly Compliance of flushing will be provided by L8 guard and reported into the CSL (Clinical Service Line) Maternity monthly meeting

Prior to use

- The pool should be flushed daily
- Ensure the pool is cleaned prior to use by filling and then rinsing with cold water, run the taps for two minutes.

<u>Infection Prevention & Control (IPC)</u>

Women/birthing people using the pool should have intact skin and be free from skin conditions, such as eczema or psoriasis to reduce risk of infection. Long sleeved gloves (gauntlets) are available for staff who want to use them when assisting at a water-birth. Staff should ensure that any cuts or abrasions are covered with a waterproof dressing.

The pool should be kept free of faecal matter and large particles should be removed. Equipment such as jugs, sieves and brushes should be single use.

If there is heavy contamination the woman/birthing person should be advised to leave the pool, the pool must be emptied, cleaned in accordance with current IPC recommendations and dried prior to refilling.

The bath surface and shower head must have no chips or cracks and be free of rust.

The birthing pool must be cleaned using a protocol agreed with IPC team and in accordance with the manufacturer's guidelines

Cleaning of the Birthing Pool after each use (cross site)

- .
- Ensure the room is well ventilated.
- Use appropriate Personal Protective Equipment (plastic apron, disposable gloves and eye protection) when cleaning the pool.
- Make up a 1 litre solution of hypochlorite bleach and detergent to 1000ppm (Chlorclean or Actichlor Plus) which is 1 tablet dissolved in 1 litre of water. Soak your disposable cloths and mops in the solution. Never re-dip a used cloth or mop back into the clean solution
- Remove any debris from the pool, using the sieve, before emptying the pool to avoid blocking the pool waste outlet. Throw away the disposable sieve in an orange waste bag.
- Remove the pool thermometer before opening the outlet. Empty the pool.
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- Run the tap for a minimum of 2 minutes (flushing)
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- Don a new pair of gloves
- Use the chlorine solution and a disposable cloth and mop to clean the pool. Start from the top of the pool (the cleanest area) and work your way down towards the base of the pool (the dirtiest area) ensuring you do not go over areas already cleaned. Finish with the plug and plug hole.

Don a new pair of gloves

- Taking a **new disposable cloth or wipe** – clean the tap/shower head starting with the spout.
-
- The pool thermometer and mirror should be thoroughly cleaned after each use using hypochlorite bleach and detergent solution to 1000ppm (Chlorclean or Actichlor Plus) then rinsed and air dried

- Dispose the mop head and/or cloths in an orange waste bag, tie and secure with a waste tag and dispose of in the correct bin.
- The drainage outlet pipe should be kept closed when not in use
- Complete the pool cleaning sheet with signature, date and time. The manager of the clinical area is responsible for ensuring compliance with pool cleaning and retaining signature sheet.

  The pool room floor/all areas should be cleaned as per usual guidance.

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Audit

Standards to be audited	Lead for the audit	Frequency, audit Tool and Methodology	Reporting arrangements	Acting on recommendations and Lead (s)	Change in practice and lessons to be shared Dissemination of results/action plans.
1. Maternal observations and pool temperature to be carried out according to Guideline. 2. The length of time spent in the birth pool. 3. Did the woman deliver in the pool? 4.The baby's Apgar scores at 1 minute and 5 minutes. 5.The time of the decision to leave the pool (e.g. 0820 hours.) 6. Reasons(s) for exiting the birth pool. 7. If the baby was transferred to NICU, the reason for the transfer. 8. Perineal outcome 9.Was birth pool on Delivery Suite used? 10. Was risk assessment undertaken and signed (x2) for home births (Appendix 5) 11.Was Risk assessment sticker used for Delivery Suite Deliveries? 12. Was Risk assessment tool used for raised BMI women?	Will be nominated by the maternity audit leads (Consultant or Midwife) according to the Maternity Governance Audit plan. Regular audits will be undertaken by the MLBU/Acorn Suite Team reporting to the Consultant Midwife.	This will be performed according to audit plan. Data will be collected using an audit proforma (designed by the auditors and approved by the maternity audit leads. The auditors will analyse the data and develop recommendations and action plans from the audit results.	The audit results, recommendations and action plans will be presented either at an audit meeting, a Clinical Governance day or at a Risk and Audit meeting.	The O & G Risk and Governance Committee will approve recommendations and action plans to be implemented within a specific time frame. The auditors will implement and monitor action plans with support from the clinical leads, senior midwives and pertinent groups. There will be six-monthly update of action plans. The O & G Risk and Governance Committee will oversee the implementation and monitoring of the action plans.	The audit results and approved action plans will be disseminated by the maternity audit team to all relevant staff groups, pertinent meetings and through the Delivery Suite newsletter, Risk and Governance newsletter, the Senior Staff meetings, the Delivery Suite Forum and by email. The Trust Audit and Clinical Effectiveness Group will be updated regularly by the maternity audit team.

Appendix 1

MLBU/Acorn Suite and Consultant Led Unit Fixed Birthing Pool Evacuation Procedure

In the event of staff having to evacuate the fixed birthing pool, the following process should be followed:

- Minimum staff required to evacuate pool using evacuation sling is 6.
- Evacuation nets/slide sheets to be available in all rooms which have a birth pool.
- For larger patients, one member of staff per 20kg is recommended.
- It is advisable to place disposable Inco pads or bed sheets on the floor under the trolley if available. This will reduce potential slip hazards.
- Patients head should be supported above the water until the inflatable head/neck support can be put into position. Once in position, patient may still require head to be supported.
- Evacuation sling/net should be positioned underneath the patient, ensuring it is correctly aligned. The sling should be positioned from the side of the patient, ensuring the patient is supported with head out of the water at all times.
- Ensure that the patient is centrally positioned in the sling, and that the torso and thighs are fully supported
- Patient should then be turned so that head and shoulders are at the desired exit point of the pool. This can be done using the sling. Head and legs should be supported at all times during the turning.
- The patient must always be evacuated head and shoulders first.
- Trolley should be positioned with foot end lined up with patient's head and shoulders. Ensure that the trolley's brakes are applied, and that the trolley height is set level with the lip of the pool. Padding must be placed on the trolley's foot end to cover drip holders and trolley edge. (A pillow, blankets or towels)
- Staff should position equally on either side of the pool, and take a firm grasp of the lift handles on the evacuation sling. At all times, ensure that the patients head is supported.
- In unison, on the command "Ready, Steady, UP" the patient should be lifted onto the inner seat of the pool. This allows water to drain through the sling back into Pool.
- Staff should reposition ready for the final transfer onto the trolley.
- In unison, on the command "Ready, Steady, OUT" the patient should be lifted from the inner seat of the pool, up over the lip of the pool onto the trolley. Once on the trolley, the evacuation sling can be used to move the patient up the trolley ready to transfer. One slide sheet can be placed lengthways down the bed with half of the second sheet laid on top of the first at the foot end and the other half behind the patients back while being cradled in the net. As the woman is moved up the bed, a member of staff at the head end of the bed can then simultaneously pull the top slide sheet up the bed as the woman moves. This will facilitate a smoother transfer.
- The patient should then be transferred on the trolley to a suitable treatment area (e.g. operating theatre or Delivery Suite)

Staff should be aware at all times of the potential slip hazards caused by water during the evacuation process.

Appendix 2

MLBU/Acorn Suite Inflatable Birthing Pool Evacuation Procedure

Prior to filling Pool, ensure correct placement of the Pool to facilitate evacuation. In the event of staff having to evacuate the inflatable birthing pool, the following process should be followed:

- Minimum staff required to evacuate pool using evacuation sling is 6.
- Evacuation sling is kept with the Inflatable Birthing Pool at all times.
- For larger patients, one member of staff per 20kg is recommended.
- It is advisable to place disposable Inco pads or bed sheets on the floor under the trolley if available. This will reduce potential slip hazards.
- Patients head should be supported above the water until the inflatable head/neck support can be put into position. Once in position, patient may still require head to be supported.
- Evacuation sling should be positioned underneath the patient, ensuring it is correctly aligned. The sling should be positioned from the side of the patient, ensuring the patient is supported with head out of the water at all times.
- Ensure that the patient is centrally positioned in the sling, and that the torso and thighs are fully supported
- Patient should then be turned so that head and shoulders are at the desired exit point of the pool. This can be done using the sling. Head and legs should be supported at all times during the turning.
- The patient must always be evacuated head and shoulders first.
- Trolley should be positioned with foot end lined up with patient's head and shoulders. Ensure that the trolley's brakes are applied, and that the trolley height is set level with the lip of the pool. Padding must be placed on the trolley's foot end to cover drip holders and trolley edge. (A pillow, blankets or towels)
- Staff should position equally on either side of the pool, and take a firm grasp of the lift handles on the evacuation sling. At all times, ensure that the patients head is supported.
- In unison, on the command "Ready, Steady, UP" the patient should be lifted onto the edge of the pool. Ensure that the patient's legs are supported up level with the hips. Use the pool edge as a seat. This allows water to drain through the sling back into Pool.
- Staff should reposition ready for the final transfer onto the trolley.
- In unison, on the command "Ready, Steady, OUT" the patient should be lifted from the inner seat of the pool, up over the lip of the pool onto the trolley. Once on the trolley, the evacuation sling can be used to move the patient up the trolley ready to transfer.
- The patient should then be transferred on the trolley to a suitable treatment area (e.g. operating theatre or Delivery Suite)

Staff should be aware at all time of the potential slip hazards caused by water during the evacuation process.

Appendix 3

Delivery Suite Fixed Birthing Pool Evacuation Procedure

In the event of staff having to evacuate the fixed birthing pool, the following process should be followed:

- Minimum staff required to evacuate pool using evacuation sling is 6.
- Evacuation sling and slide sheets are kept in Delivery Suite Room 10 at all times.
- For staff safety, one member of staff per 20kg is recommended, to a maximum of 8 staff.
- It is advisable to place disposable Inco pads or bed sheets on the floor under the bed if available. This will reduce potential slip hazards.
- A slide sheet should be placed on the bed as soon as the need to evacuate is identified.
- Patients head should be supported above the water until the evacuation sling is put into position. Once in position, patient may still require head to be supported.
- Evacuation sling should be positioned underneath the patient, ensuring it is correctly aligned. The sling should be positioned from the side of the patient, ensuring the patient is supported with head out of the water at all times.
- Ensure that the patient is centrally positioned in the sling, and that the torso and thighs are fully supported
- Patient should then be turned so that head and shoulders are at the desired exit point of the pool. This can be done using the sling. Head and legs should be supported at all times during turning.
- The patient must always be evacuated head and shoulders first.
- Bed should be positioned with foot end lined up with patient's head and shoulders. Ensure that the bed's brakes are applied, and that the height is set level with the lip of the pool. Check that the slide sheet has been placed on top of the bed sheets.
- Staff should position equally as follows: two on either side (minimum, max 3 either side) of the pool take a firm grasp of the lift handles on the evacuation sling. One member of staff should ensure head/neck supported at all times. One member of staff should support the patient's feet.
- In unison, on the command "Ready, Steady, UP" the patient should be lifted onto the inner seat of the pool. This allows water to drain through the sling back into Pool.
- Staff should reposition ready for the final transfer onto the trolley.
- In unison, on the command "Ready, Steady, OUT" the patient should be lifted from the inner seat of the pool, up over the lip of the pool onto the bed. The slide sheet will allow the evacuation sling to move up the bed to allow correct positioning. One slide sheet can be placed lengthways down the bed with half of the second sheet laid on top of the first at the foot end and the other half behind the patients back while being cradled in the net. As the woman is moved up the bed, a member of staff at the head end of the bed can then simultaneously pull the top slide sheet up the bed as the woman moves. This will facilitate a smoother transfer.
- The slide sheet should be removed once correct position has been achieved. If treatment is possible in room 10, the evacuation sling should also be removed using the rolling method. If patient is to be transferred to theatre, the sling can be removed once the transfer to theatre has taken place.

Staff should be aware at all times of the potential slip hazards caused by water during the evacuation process.

Appendix 4

Community Inflatable Birthing Pool Evacuation Procedure

In the event of evacuation of the inflatable birthing pool, the following process should be followed:

- **Patient must be given instruction to exit the pool before physical evacuation is considered. Physical evacuation should be as a last resort.**
- Call for Paramedic assistance, and wait for arrival if possible.
- Ensure Patient's head is supported out of water at all times
- Birthing partner may assist with supporting patient's head if deemed appropriate
- Deflate middle chamber of birthing pool. This may cause some water spillage.
- If available, place cushions (possibly from sofa), or Blankets/duvet on floor at desired pool exit point.
- The patient should be positioned as close to the desired exit point a possible within the pool.
- A minimum of 3 people should be used for the physical evacuation.
- One person should support the patients head and shoulders.
- Two further people should be either side of the patient at waist level, supporting under the patient's waist and knee.
- The patient should be slid head and shoulders first onto the edge of the pool, and with support from all 3 people, allowed to slide off the pool onto the floor.
- People should avoid getting into the pool to carry out this transfer.
- Once the patient is positioned on the pool, essential care must be maintained prior to transferring onto ambulance stretcher if required.

Staff should be aware at all time of the potential slip hazards caused by water during the evacuation process. Care should also be taken to ensure no electrical items are near to the birthing pool.

This process should be followed in conjunction with clinical judgement. Dynamic risk assessment should be carried out continuously.

Appendix 5

Home Birth Risk Assessment Proforma

Home birth risk assessment at 36 weeks by community midwife

All women should have a risk assessment and be assisted with a birth plan at 36/40 of pregnancy to include place of birth. This assessment should be undertaken in the woman's home and documented in the handheld notes.

This assessment overviews previous pregnancies and births and how the current pregnancy is progressing.

Five steps to risk assessment can be conducted with women to ensure that the assessment is carried out correctly:

1. Identify hazards

2. Decide who might be harmed and how

3. Evaluate the risks and decide on control measures

4. Record findings and implement them

5. Review assessment and update if necessary (Health and Safety Executive, 2014).

Step 1

In order to identify hazards, the difference between a 'hazard' and 'risk' need to be understood: a hazard is something that has the potential to cause harm and a risk is 'the likelihood of that potential harm happening. For example, if the mother wishes to use a pool in the home, is there enough space for the midwife to manage a birth without injury to herself or to the mother (hazard), what is the likelihood of injury occurring? (risk). Women should be informed that with large quantities of water there is the potential for damage within the property.

Step 2

Once any hazards have been identified, it needs to be understood who might be harmed, such as the midwife, the mother, or the partner, and how they might be harmed. A partnership approach means that the mother will be able to understand the risks herself. For example, if an emergency situation arose, would access be adequate for emergency services?

Step 3

After identifying the hazards, it is important to decide the level of risk and protect people from harm. The hazards can either be removed or the risks controlled, to reduce the likelihood of injury.

Step 4

Findings should be documented as a legal requirement (NMC, 2020); recording the hazards, noting who could be harmed and how, informing the woman and showing any plans to eliminate or reduce the risks and hazards.

Step 5

The original decisions and choices may change as the wellbeing of mother and baby fluctuate throughout pregnancy. As a result, risk assessment should be reviewed and updated when required. The woman is at the heart of service delivery and the midwife will continue to support her choice even if risks become apparent. The most important factor is that the midwife seeks support and advice from her Operational Manager/Consultant Midwife.

Signature of Midwife:

Date and Time:

Signature of Patient:

Date and Time:

Appendix 6: Cleaning Community Birth Pool

Appendix 7

Individualised Clinical Risk Assessment

For multiparous women (with previous vaginal delivery) requesting use of water for labour and birth with BMI >35 but below 40

Name: **DOB:** **NHS number:**	**Planned place of birth:** **Lead professional:** **EDD:** **Parity:**
Location of assessment: **Midwife undertaking risk assessment:** **Date:**	**Risk factors of note:** **BMI at booking:** **Weight at 36/40:**

Clinical factors to be considered	Clinical assessment / discussion	Comments
Woman has good mobility	• Woman is able to enter and exit the pool (when not in labour) with minimal assistance	
Weight within safe working load for equipment • Pool evacuation net (200 kg Luton)	• Review last weight measurement in pregnancy. • Ask the woman to be weighed if not done in the last 2 weeks (do not recalculate BMI). • Emergency evacuation explained.	

• Pool evacuation net (320 kg Bedford) • Labour Bed (213 kg Luton)		
Ability to monitor the fetal heart adequately using • EFM telemetry • IA	• It is possible to determine fetal lie and position on palpation. • The fetal heart can be easily identified and auscultated.	
Progress in labour can be adequately assessed • Abdominal palpation and VE • Visualisation of advancing head	• It is possible to determine fetal lie, position and descent on palpation. • Woman is aware that periodically her midwife may ask her to exit the pool briefly to have an abdominal palpation and VE. • If the midwife is not able to assess progress or there are signs of delay she will be asked to exit the pool.	
Clinical factors to be considered	**Clinical assessment / discussion**	**Comments**
Monitoring of maternal wellbeing	• Undertaking maternal observations in water. • Assessment of input and urinary output, (must exit the pool to pass urine).	
Willingness to exit pool if concerns are identified in labour or if feels unwell.	• Woman understands that if concerns around maternal or fetal condition arise we will ask her to exit the pool. • Events in labour such as passage of meconium stained liquor, APH or suspected sepsis would mean that we would ask her to remain out of the water. • Alternative pain relief and support options explored.	
Preferences for birth in water or on land	• Advise the woman to birth on land if there are additional risk factors identified in labour or in prior history (See 'criteria for use of the pool') • Discuss wishes on exiting pool	
Management of the third stage of labour • Timing of exiting the pool • Active – drug and route discussed	• Woman is aware of the recommendation to have active management of the third stage. • Assess risk factors for PPH including last Hb. • Assess likely ease of cannulation if needed.	

• Physiological		
Any other issues:		

Outcome of risk assessment:	**Comments:**
Can use pool for labour and birth	
Advised to use pool for 1st stage only	
Not suitable for use of pool in labour	

Appendix 8 Legionella and Pseudomonas minimisation – outlet flushing record for Delivery Suite (Bedford Site)

Legionella and Pseudomonas minimisation –outlet flushing record for Delivery Suite							
Week beginning :							
- **Roles and responsibility:** - MCA's to carry out daily pool flushing in the morning before 12pm. - Pools should be ran on a daily basis on the hottest heat for 2mins - MCA's will print and sign the pool flushing sheet found In the MCA folder on Delivery Suite in the clinical room. - Once completed show ward compliance for reporting onto L8 guard portal. In their absence they will show this compliance to Inpatient Matron OR Dept HOM. - The compliance will be uploaded to the L8 guard before 1pm.							
Clinical Room Number	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**	**Sunday**
Birthing pool Room 8							
Birthing pool Room 9							
Birthing pool Room 4							

APPENDIX 9 – Cleaning Log Luton and Dunstable

Date and Time	Taps Flushed	Full Post Use Clean	Signed