

All Wales Midwife-led Care Guidelines

5th Edition



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Introduction

The aim of these All Wales Midwife-led Guidelines revised guidelines is to provide a sound clinical governance framework to support midwives in their practice and thereby enhance the care of women, babies and their families. The guidelines also recognise the individuality of women, and are not meant to replace the knowledge, skills and clinical judgment of experienced health professionals.

The revised guidelines have incorporated any new recommendations from national organisations such as NICE, RCOG and Obs Cymru.

Background

To understand and determine principles for Midwife-Led Care it is important to accept and agree a definition.

A midwife-led model of care assumes that pregnancy, birth and the post natal period are normal life events for a woman and her baby. It is woman-centred and based on the belief that continuity of care in monitoring the physical, psychological, spiritual and social well-being of the woman and family throughout the childbearing cycle is critically important. A midwife-led model of care provides the woman with individualised education, counselling and antenatal care, continuous attendance during labour, birth and the immediate postpartum period and ongoing support during the postnatal period. Technological interventions are absent or minimised and women who require obstetric or other specialist attention are appropriately referred for opinion. The midwife plays a central role in coordinating care and linking with other health care professionals providing services for childbearing women (adopted from International Confederation of Midwives 2011).

This definition clearly places the midwife in a central position in both providing care and communicating with other family members, providers and clinicians.

The wellbeing of women and their families come first. Midwife-led unit's care should be based on a social model of care which views birth not as an

isolated clinical episode, but as a transformative life experience, enhancing the long term physical and emotional wellbeing of women and their families. Care from a midwife will take place in many diverse settings including the woman's home and as such requires midwives to be adaptable and versatile. Nonetheless wherever that care occurs there are important elements that should be present to ensure women's and their babies' safety.

"It is important that the woman is given information and advice about all available settings when she is deciding where to have her baby, so that she is able to make a fully informed decision.

This includes information about outcomes for the different settings. It is also vital to recognise when transfer of care from midwife-led care to obstetric-led care is indicated because of increased risk to the woman and/or her baby resulting from complications that have developed during labour." NICE (2014).

In November 2011 The findings of, "The birthplace national prospective cohort study. Perinatal and maternal outcomes by planned place of birth. Birthplace in England research programme Final report part 4" (commonly known as the Birthplace Study) was published. This study reviewed the place of birth for healthy women experiencing a straight forward pregnancy and in terms of adverse perinatal outcomes for babies. This study found that for „low risk" women the incidence of adverse perinatal outcomes (Intrapartum still birth, early neonatal death, neonatal encephalopathy, meconium aspiration syndrome, and specified birth related injuries including brachial plexus injury was low (4.3 events per 1000 babies) (NPEU 2011).

Midwife led units appear to be safe for the baby and offer benefits for the mother (NPEU 2011).

The only statistical difference found in this study was the perinatal mortality rate was increased in women giving birth at home to their first baby. There was a significant increased probability that women having their first baby may need transfer to an obstetric unit compared to women experiencing subsequent births.

A recent Cochrane review comparing midwife-led care models to other models of care found that midwife-led continuity of care was associated with several benefits for mothers and babies. The main benefits were a reduction in the use of epidurals, fewer episiotomies or instrumental births. Women's chances of having a spontaneous vaginal birth were also increased. The review concludes that most women should be offered midwife-led continuity models of care, although caution should be exercised in applying this advice to women with substantial medical or obstetric complications. (Sandall et al 2013).

At all times it must be clear who is the **lead professional** co-ordinating a woman's care (WRP 2005). Following any referral for additional care, the lead professional should document the management care plan in the woman's hand held records. When the deviation from normal has resolved and no further additional care is required the woman should be referred back to her midwife who will resume responsibility as the lead professional.

The lead professional should ensure that all aspects of care have been discussed with the woman and that discussions have been documented with clear guidance on the action required. If a woman decides not to accept the offer of referral for additional care, the midwife will continue to provide midwifery care. In these circumstances the midwife should discuss the plan of care with a senior midwifery manager or consultant midwife. The accountability will remain with the named midwife to plan the woman's care but they can support this process. The documentation and management plan should clearly reflect the woman's decision and the information given to her to make this decision.

Best Practice Points

- All women should be assessed at booking to determine appropriate lead professional and place of birth. Any specific needs identified should be documented in the women's antenatal hand-held record.
- Advise multiparous women with straightforward pregnancy that planning to give birth at home or in a midwife-led unit (freestanding or alongside) is particularly suitable for them because the rate of interventions is lower and the outcome for the baby is no different compared with an obstetric unit.
- Advise nulliparous women with straightforward pregnancy that planning to give birth in a midwife-led unit (freestanding or alongside) is particularly suitable for them because the rate of interventions is lower and the outcome for the baby is no different compared with an obstetric unit. Explain that if they plan birth at home there is a small increased chance of an adverse outcome for the baby.
- For healthy women with a straightforward pregnancy planning birth at home or in a freestanding midwife unit is associated with a higher rate of spontaneous vaginal birth than planning birth in an alongside midwifery unit, and these 3 settings are associated with higher rates of spontaneous vaginal birth than planning birth in an obstetric unit.
- For healthy women with a straightforward pregnancy planning birth in an obstetric unit is associated with a higher rate of interventions, such as instrumental vaginal birth, caesarean section and episiotomy, compared with planning birth in other settings.
- There are no differences in outcomes for the baby associated with

planning birth in any setting for multiparous women.

- Planning birth at home for nulliparous women is associated with an overall small increase (about 4 more per 1000 births) in the chance of a baby having a serious medical problem compared with planning birth in other settings (NICE 2014).

Uncomplicated pregnancies

- For healthy women experiencing straightforward pregnancy the appropriate lead professional is the midwife.
- Antenatal care for women with straightforward pregnancy should be provided in accordance with NICE guidelines for routine antenatal care. (NICE 2008).
- In planning **place of birth** women should be informed that research suggests positive outcomes for women who choose to give birth to their babies in midwife-led environments:-
- **low-risk** women planning to give birth in a midwife-led unit and **low-risk multiparous** women planning to give birth at home experience fewer interventions than those planning to give birth in an obstetric unit with no impact on perinatal outcomes. (NPEU 2011).
- **Low-risk nulliparous women** have a greater chance of requiring intrapartum transfer than **low-risk multiparous women**. (NPEU 2011).
- **Low-risk women** who give birth in a birth centre type environment report higher levels of satisfaction with their birth experience as they report feeling informed, listened to and supported in their decision-making. (Overgaard et al 2012).

Midwives are responsible for keeping up to date with the latest research outcomes and providing women with all the relevant information they require to make an informed choice about their preferred place of birth.

- Clinical assessment should be repeated as necessary throughout pregnancy and any new issues arising should be documented in the hand-held record and an individualised management plan recorded. The appropriateness of the current lead professional and planned place of birth should be re-considered whenever new potential issues are identified and should be included in the documentation.
- The planned place of birth should be re-assessed at 36 weeks and at the start of labour.
- Referral by the Midwife should be by referral letter or phone call to

the specialist depending on the urgency. This should include any relevant information from the GP.

- If a referral is URGENT a telephone call should be made to ensure the message is received initially by the appropriate professional using the Situation Background Assessment Recommendations (SBAR) format.
- Once this URGENT referral has been made the midwife must ensure that the woman has been seen by the appropriate person.
- Referral back to midwife-led care from Consultant-led care should be clearly documented in the hand-held notes along with a clear management plan.

Timing of Assessments

- Booking.
- Antenatal appointments.
- Antenatal admissions.
- On commencement and throughout labour.
- Postnatal contacts.

Antenatal Clinical care assessments

Timing of Antenatal Assessments

- **Booking:** There should be a full assessment at booking to identify any specific needs or issues taking into account the woman's physical, social, psychological, and emotional needs, in order to assign the **appropriate lead professional** for her pregnancy care and to plan for the most appropriate **place of birth**. The question of domestic abuse should also be raised at booking (CMACE 2011) in accordance with local guidance.
- **Antenatal appointments and admissions:** Assessment should be repeated as necessary throughout pregnancy and any new issues arising should be documented in the hand-held record and an individualised management plan recorded. In the light of any additional factors identified a review of the lead professional and place of birth should be discussed and documented.
- **36 weeks:** Repeat **place of birth** assessment at 36 weeks and at any other time that additional issues are identified. The hand-held notes should be updated appropriately.
- **On commencement of labour and throughout labour:**
Women should be reassessed when they commence in labour for any new issues that may affect their care. This should be a continual process throughout labour.

Women identified with issues requiring additional monitoring or care.

Women with additional needs should generally be recommended for obstetric-led care. See appendix 1 NICE criteria. (NICE 2014).

Obtaining further information regarding previous pregnancies from health records. Consent for data sharing will be required from the women.

- If the booking assessment indicates a need for further information from other health care professionals, e.g. the GP, the midwife should ensure that a request for information is followed up, if necessary by telephone. (CMACE 2011).

-
- If the woman has had previous births in other maternity units, and the midwife requires additional clarification and details of previous pregnancies, then he/she should write to the hospital that provided care to get copies of the pregnancy details as required to ensure a full review is undertaken, or alternatively request a report on care provided.

Process for Antenatal Referral

Midwives may be required to take a flexible and individualised approach to the delivery of care. Midwives should ensure they make appropriate and timely referrals to other professionals within a multi-disciplinary team appropriate to the individual's needs. Midwives should advise GP's and health visitors of women identified as having complex social needs.

The midwife can refer at any stage to a consultant obstetrician for advice. The midwife should clearly document the reason for this referral in the appropriate section of the hand-held notes.

Following the review:

The obstetric team should clearly document in the hand-held record whether the woman is to remain under consultant-led care or be referred back to midwife-led care, along with any antenatal clinic follow up if necessary.

The obstetrician will either:

- Give advice and the woman will remain under Midwife-led Care
or
- Recommend change of lead professional to Consultant-led Care.

In either instance a clear individualised management plan should be documented in the appropriate section of the hand-held notes.

When a Woman Declines Referral

There may be circumstances when a woman does not wish to be referred to obstetric care despite professional advice. In this case, ensure that the woman understands the reason for recommending the referral and document the discussion. Inform the obstetrician that the referral has been declined. This does not prevent a midwife from seeking professional advice from a consultant with regard to management of care for the individual. Discussing the issues and seeking support with a senior midwifery manager or Consultant midwife may be helpful for the midwife.

Normal Labour and Birth

The World Health Organization (WHO) defines normal birth as spontaneous in onset, low-risk at the start of labour and remaining so throughout labour and delivery. The infant is born spontaneously in the vertex position between 37 and 42 weeks of pregnancy. After birth mother and infant are in good condition. (WHO, 1998).

Latent Phase of Labour

Taken from (NICE 2014- updated 2017)

Definitions of the latent and established first stages of labour:

“Latent first stage of labour – a period of time, not necessarily continuous, when: there are painful contractions **and** there is some cervical change, including cervical effacement and dilatation up to 4 cm.”

“Established first stage of labour – when: there are regular painful contractions **and** there is progressive cervical dilatation from 4 cm.”

Give all nulliparous women information antenatally about:

- What to expect in the latent first stage of labour.
- How to work with any pain they experience.
- How to contact their midwifery care team and what to do in an emergency.
- Offer all nulliparous women antenatal education about the signs of labour, consisting of: how to differentiate between Braxton Hicks contractions and active labour contractions; the expected frequency of contractions and how long they last; recognition of amniotic fluid ('waters breaking'); and description of normal vaginal loss.
- Consider an early assessment of labour by telephone triage provided by a midwife for all women.
- Consider a face-to-face early assessment of labour for all low-risk women, either:
 - at home (regardless of planned place of birth) **or**

-
- in an assessment facility in her planned place of birth (midwife-led unit or obstetric unit), comprising one-to-one midwifery care for at least 1 hour.
 - Include the following in any early or triage assessment of labour:
 - Ask the woman how she is, and about her wishes.
 - Expectations and any concerns.
 - Ask the woman about her baby's movements, including any changes.
 - Give information about what the woman can expect in the latent first stage of labour.
 - How to work with any pain she experiences.
 - Give information about what to expect when she accesses care.
 - Agree a plan of care with the woman, including guidance about who she should contact next and when.
 - Provide guidance and support to the woman's birth companion(s).
 - The midwife should document the guidance that she gives to the woman.
 - If a woman seeks advice or attends a midwife-led unit or obstetric unit with painful contractions, but is not in established labour:
 - Recognise that a woman may experience painful contractions without cervical change, and although she is described as not being in labour, she may well think of herself as being 'in labour' by her own definition.
 - Offer her individualised support, and analgesia if needed.
 - Encourage her to remain at or return home, unless doing so leads to a significant risk that she could give birth without a midwife present or become distressed.
 - Advise the woman and her birth companion(s) that breathing exercises, immersion in water and massage may reduce pain during the latent first stage of labour.(NICE 2014).

Established Labour and Birth

All women receiving midwife-led care during the intrapartum period should follow the All Wales Clinical Pathway for Normal Labour (WG 2013), about which they should have received information at 30 - 36 weeks gestation.

Criteria for midwife-led care in labour

Please refer to (NICE 2017) and the All Wales Clinical pathway for normal labour (2013) but should include:

- Normal pregnancy without complications.
- Labouring at Term (37+⁰ to 41+⁶ completed weeks).
- Singleton pregnancy with cephalic presentation.

Use of Birthing Pool in Labour:

For women labouring in water, the temperature of the woman and the water should be monitored hourly to ensure that the woman is comfortable and not becoming pyrexial. The temperature of the water should not be above 37.5°C. [NICE 2017].

- Available evidence report large discrepancies whether or not the water temperature should be measured at regular intervals and therefore it would be difficult to agree strict temperature restrictions. It may be of more benefit to allow women to regulate the pool temperature to their own comfort and encourage them to leave and re-enter the pool in the first stage of labour as and when they wish. The woman's temperature must be recorded during the labour.
- Midwives should ensure that the ambient room temperature is comfortable for the woman and should encourage her to drink to avoid dehydration.
- Cord clamps should be readily available and midwives need to be alert to the possibility of occult cord rupture and be sensitive to any undue tension on the cord. (Anderson, 2000).
- Monitoring of the fetal heart using underwater Doppler should be standard practice, in line with the All Wales Clinical Pathway for Normal Labour. (WG 2013).
- If there are any concerns about maternal or foetal wellbeing, the woman should be advised to leave the birthing pool and an opinion from an

obstetrician or other suitably qualified person should be sought in the usual manner.

- Women should not enter water (a birthing pool or bath) within 2 hours of opioid administration or if they feel drowsy. (NICE 2014).
- There needs to be a locally agreed procedure for getting a woman out of the pool, should she become compromised, and all staff likely to be caring for the woman in the room must be familiar with the procedure and should practice it regularly in emergency drills.
- If the woman raises herself out of the water and exposes the fetal head to air, once the presenting part is visible, she should be advised to remain out of the water to avoid the risk of premature gasping under water.
- All birthing pools and other equipment (such as mirrors and thermometers) should be disposed of or thoroughly cleaned and dried after every use, in accordance with local infection control policies.
- Disposable sieves should be made available to ensure that the pool remains free from maternal faeces and other debris.
- Local information and guidelines regarding prevention of legionella build up in water supply from seldomly used pools should be obtained from local NHS trust estates and should be adhered to.
- Midwives should use universal precautions and follow local Health Board infection control guidelines.

(Adapted from the Royal College of Obstetricians and Gynaecologists/Royal College of Midwives Joint Statement No 1. (April 2006).

Midwifery Skills and Training for Water Births

- Midwives should discuss antenatally the use of immersion in water in labour with all women, as part of their overall discussions regarding options, and information leaflets should be available. It is important that information on water birth is conveyed to all women in a form they can understand and in a culturally sensitive fashion, to ensure parity of access to quality services.
- All midwives should ensure that they are competent to care for a woman who wishes to have a water birth and have a good understanding of the

basic principles of caring for a woman in labour, and should make themselves aware of local policies and guidelines. Apart from emergency drills, training should also include emergency management of cord rupture at birth, including cord clamping. (Grunebaum et al, 2004).

- Midwives, managers and Supervisors of Midwives should ensure that training in caring for a woman who wishes to have a water birth is undertaken by midwives who undertake intrapartum care, in order to increase choice for women and promote normality and ensure quality care. (NMC, 2012).

Inter-Professional Working

It would not be anticipated that medical staff would be called to attend a woman or baby in a MLU but rather, in the event of a deviation from normal progress, the woman and /or baby would be transferred to an Obstetric unit as soon as physically possible. However, in the event of an emergency arising in a MLU that is situated geographically close to the main delivery unit, Medical staff and other relevant personnel from the obstetric unit would normally be expected to provide emergency assistance for the MLU. Arrangements should be established locally depending on the geographical environment and clinical judgment of how best to meet each woman's needs safely.

The aim of management in an emergency situation arising in a MLU is to sufficiently stabilise the condition of the mother or baby to facilitate safe transfer to the delivery suite or neonatal unit. It would normally be expected that any professional groups who may be called upon in an emergency situation would be consulted in the planning and equipping of the MLU.

Emergency Maternal Transfer

All women who receive midwife-led care during labour must be clinically assessed. The assessment at the commencement of midwifery care should be recorded in Part 1 and Part 2/3 of the All Wales Pathway for Normal Labour. This process is ongoing and any deviation in risk status may result in transfer to an Obstetric unit. All deviations from the pathway must be documented and it would be anticipated that in the event of exit from the pathway transfer to consultant-led care would be considered.

Transfer for additional care in labour/the postnatal period:

Local arrangements for communication between professional groups, including the ambulance service should be in place. Correct identification of mother and baby is essential. Women should be made aware of the transfer distances and possible times for transfers during discussions regarding the place of birth. (NICE 2014).

Wherever practical, the woman and baby should be transferred together. This includes situations in which the transfer is indicated for neonatal care other than resuscitation. A midwife should remain with the labouring or newly birthed woman throughout the transfer process, including transfer by ambulance. It is unacceptable for the midwife responsible for providing care to a woman in labour or immediately post-partum to follow the ambulance in her car. If there is no space in the ambulance, the baby's father / birth partner has to travel to the Obstetric unit in his/her own car or in a taxi.

The possible outcomes when considering transfer should be assessed bearing in mind the likelihood of birth during the transfer.**Criteria include:**

- Delay in first or second stage of labour (as defined by the All Wales Clinical Pathway for Normal Labour).
- Indication for continuous electronic fetal monitoring.
- Significant meconium stained liquor (Dark green or black amniotic fluid that is thick or tenacious, or any meconium-stained fluid containing lumps of meconium).
- Inability to locate or adequately monitor fetal heart rate.
- Non-reassuring fetal heart rate.
- Maternal request for epidural pain relief.
- Maternal pyrexia: 38.0°C once, or 37.5°C on 2 occasions 2 hours apart.
- Offensive vaginal loss.
- Suspected malpresentation or breech presentation diagnosed during the intrapartum period.
- If any baseline observations, including blood pressure when taken fall within the yellow box of the MEWS which is found on the partogram in the All Wales Clinical Pathway for Normal Labour the midwife should take

advice regarding the increased frequency of recordings and consider the need to transfer. Any observations that are recorded in the red box, in the All Wales Clinical Pathway for Normal Labour should be exited and the woman transferred to an obstetric unit. (WG 2013).

- Retained placenta.
- Third/Fourth Degree or other complicated perineal trauma at this birth for suturing.

The Emergency Medical Retrieval Transfer Service Cymu (EMRTS – Flying Doctors) may be called to attend the following obstetric emergencies (See appendix 20):

- Cord presentation/prolapse.
- Intrapartum haemorrhage.
- Postpartum haemorrhage greater than 500mls or any amount that requires additional treatment.
- Severe fetal distress.
- Maternal or neonatal collapse.

Midwives must make timely referrals to consultant-led care if there are any deviations from normal. If a woman is unbooked, it is advisable to transfer care to the consultant unit if time allows.

Transferring Women from Community Settings into Hospital

There are various ways in which a midwife may choose to transport a woman into an obstetric unit during labour or in the early post-birth period if required. If an ambulance crew is requested to attend a birth situation the midwife must remember that whilst the two roles are complementary she remains the lead professional for the woman's care. Also the EMRTS may arrive to assist where eclampsia, haemorrhage, maternal or neonatal collapse has been identified. In these situations the midwife may hand care over to the EMRTS Team.

When to transfer

Transfer into hospital will be advised and encouraged for all women whose condition results in variances that lead to discontinuation of the All Wales Clinical Pathway for Normal Labour.

Women with known risk factors who are choosing to give birth against advice in community settings such as home or a free standing MLU should be advised and encouraged to transfer into hospital should any added risks develop during the intrapartum period or the progress deviate from the expected norm.

Appropriate transport for transfer

Woman's own transport

There will be very few circumstances when it would be appropriate to elect to transport a woman into hospital in her own vehicle. In some circumstances, for example, for women presenting with a prolonged and painful latent phase, or if presenting with meconium stained liquor at pre-labour rupture of membrane (PROM), it may be appropriate for them to be driven in a non-emergency vehicle. Any such decision must be fully-assessed and documented by the midwife. Professional judgment is required as to when this would be appropriate and midwives must remain accountable for their decision.

Ambulance transfer

Requesting an urgent transfer

Staff requiring a transfer in a nonlife threatening situation should consult their local agreements for most appropriate numbers to call.

Requesting emergency transfer:

An emergency transfer should be requested where there is an immediate threat to life for the mother or baby.

In order to arrange an emergency transfer a midwife should **dial 999** in the same way as the public access the service.

Calls received via 999 are prioritised based on the information gathered by the call taker. Calls can be prioritised as red or green affording a response time target of 8 minutes for a red call and 30 minutes for a green call. (Appendix 18)

The priority of a call is determined by the answers given by the caller to questions asked by the Welsh Ambulance Services NHS Trust (WAST) call taker. It is therefore vital that when an ambulance transfer is requested that all of the relevant information is known by the person making the call. The questions which will be asked on a caller requesting an emergency transfer

will be as follows:

- The reason for the admission.
- If an “obstetric emergency” exists.
- If the clinician is with the patient (and if so, if a Defibrillator is present).
- If the condition presents an “**immediate**” threat to life.

Depending upon the answer to these questions, the women may receive an 8 minute, 30 minute or 1 to 4 hour response.

Attendance of EMRTS team:

Where indicated and available the EMRTS will provide an enhancement of pre-hospital critical care to the pregnant or newly delivered woman and the neonates in the home and free standing MLU's where either is deemed to be in a critical/ life threatening condition. The team can support midwives in providing care to stabilize and safely transfer the mother and or neonate. This may be by air or by road and will be decided on a case by case basis. The criteria for EMRTS attendance is available in Appendix 18 and a process map for attendance of EMRTS is in Appendix 19.

In emergency situations ambulance crews will normally only transfer women to the nearest District General Hospital providing obstetric support. This may not be the hospital at which the woman has booked for care or to which she would prefer to be transferred and this should be discussed with the woman in the antenatal period.

The midwife should accompany the woman in the ambulance and remains the lead professional responsible for care unless it is appropriate to handover care to the EMRTS.

The midwife should familiarise herself with the local arrangements to enable her to return to the woman's home/free standing MLU in order to collect her car/home birth van. WAST is unable to provide this service and local organisational arrangements need to be in place.

Air ambulance

In extreme circumstances it may be appropriate to transfer by air ambulance. This decision would be undertaken in conjunction with Ambulance Control and the EMRTS.

The transportation of “labouring” women is not safe in the Welsh Air Ambulance (WAA) helicopters. This is due to the position of the woman on the aircraft, it is not possible to supervise or assist a birth during flight. Therefore, air ambulance transport must only be considered for “non-labouring” women.

These helicopters can be fitted with the babypod incubator for safe baby transport on the aircraft stretcher.

Transferring both mother and baby in the same ambulance

In the United Kingdom the law dictates that all personnel, be it mother or baby, must be securely strapped in the ambulance.

Ambulances should carry a suitable adapter/ harness so babies can be safely secured on a stretcher. All ambulances in Wales have three seats and therefore can accommodate both a midwife and ambulance personnel. At this present time there isn't a standard “car seat” which can be securely fastened into the interior ambulance seats if the mother is on the stretcher.

If the mother is being transferred after the birth and she is unable to sit on a seat, and the baby cannot be secured in the front seat of the ambulance, he/she will need to be transferred separately as per local requirements.

Emergency Neonatal Transfer

The preferred aim is to transfer in utero, reducing the need for emergency transfer of the baby following birth.

The midwife must be able to facilitate transfer of the baby from a free standing MLU or home immediately upon arrival of the ambulance. Please see appendix 17 for neonatal reasons for transfer.

If transfer out from a MLU or home is indicated, there must be immediate communication using the SBAR format with the receiving obstetric unit / neonatal unit. The clinical situation must be assessed and help summoned from midwives in the community if required.

Inform the neonatologist and/or obstetrician and/or senior midwife and/or anesthetist in the Obstetric unit, if there is any deviation from normal in the maternal or fetal condition. The **safety of mother and baby is paramount**.

	Principle Aims of Action during Transfer
1	Identify the problem and implement the relevant guidelines/policy accordingly.
2	Maintain appropriate documentation (record keeping).
3	Initiate urgent transfer by emergency ambulance 999 from the free standing MLU or the home, if liaising with EMRTS if attending.
4	Keep the woman and her birthing partner informed the of situation and all actions taken.
5	<p>Liaise with the EMRTS and/or the midwife in charge, and an obstetrician of at least registrar level at the obstetric unit stating the urgency of transfer,</p> <p>OR</p> <p>Liaise with neonatal middle grade doctor in charge of the NNU who will inform the consultant neonatologist stating the urgency of transfer.</p>
6	<p>Record the timings of the call for, and the /arrival of the ambulance crew.</p> <p>Ensure that the woman and/or her baby are ready for transfer when the ambulance arrives.</p>
7	<p>When a woman is transferred:</p> <ul style="list-style-type: none"> • The midwife should escort the woman ensuring all appropriate documentation is taken. • The partner should accompany in ambulance or, if not possible, follow in their own transport or by taxi. <p>When a baby is transferred:</p> <ul style="list-style-type: none"> • The midwife should escort the baby ensuring that all appropriate documentation is taken. • The mother may be able to accompany in ambulance if baby does not require resuscitation. • A second ambulance may be required to transfer the mother depending on her own clinical condition. In this case the partner should follow in their own transport or by taxi. <p>In the event of an obstetric emergency the midwife may hand over care of</p>

	the woman or her baby to the EMRTS for stabilization and transfer.
8	<p>Ambulance crew/ EMRTS should confirm on route with the radio control centre, which obstetric unit they are transferring into and the estimated time of arrival.</p> <p>Where possible MLU staff should confirm to the obstetric unit the time at which the ambulance left.</p>
9	On arrival at the obstetric unit, the midwife and/or the EMRTS should escort the woman to the appropriate area and hand her care over to the appropriate professional.
10	The MLU midwife will return to the MLU, using transport as per local arrangements, when a woman/baby's care has been handed over to the appropriate professional.
11	All documentation must be completed. Forms for the most common emergencies can be found in the appendix of this guideline.

Referral back to Midwife-led Care during the Postnatal Period

Once a woman or her baby has been transferred to consultant-led care a full assessment should be taken and care plans put in to place including assessment to ensure that any deviation from normal does not present any further care issues prior to transfer back to midwife led care. During the postnatal period the most appropriate place for well women to receive care is in their own home and local arrangements should be agreed for postnatal care and suitability of transfer back to a midwife-led unit for women for whom immediate transfer home is not an option.

Management of Obstetric Emergencies in Midwife-led Units or Home

The aim of management in an emergency situation arising in a MLU or home is to sufficiently stabilise the condition of the mother or baby to enable safe transfer to the delivery suite or neonatal unit. See Appendices 2, 3, 5, 7, 9, 10, 12, 13, 14 and 15 for obstetric emergency management guides.

All midwives are expected to attend mandatory updating sessions at least annually to maintain their skills in emergency situations. Forms for recording care should be used for contemporaneous documentation of procedures during an emergency situation. Examples of such forms are available in

Appendices 4, 6, 8 and 11. Appropriate help should be summoned immediately.

Home or Midwife-led Birth against Medical/Midwifery Advice

There may be occasions when a woman will choose to give birth at home or at a MLU against the advice of either a midwife or obstetrician. This is because her present medical or obstetric history indicates an increased chance of requiring additional care. In such circumstances the following should be considered.

The overall aim must be to ensure that safe and effective care is provided to mother and baby whilst allowing women to make an informed choice about the place of birth. It is important to build a trusting relationship/partnership with the woman and her family. If any woman chooses to give birth at home or in an MLU, against professional advice, every effort should be made to encourage her to consent to be transferred into an obstetric unit if additional care needs are identified, in a timely manner.

In the event of a woman informing a midwife that she wishes a home or MLU birth and where she falls outside the criteria for midwife led care, the midwife should do the following:

- A senior midwifery manager or consultant midwife, should be informed and their support sought. This should be done at the earliest opportunity so that a relationship with the woman and her family can be established.
- The woman should be encouraged to engage with her named consultant obstetrician so that the multi professional team is involved in management and care planning.
- For women who are not willing to engage with obstetric staff, the midwife should contact the consultant obstetrician for guidance on issues relevant to each individual woman and advice while developing the care plans.
- Any consultations or discussions which take place should be documented fully in the handheld record which the woman may be asked to counter sign.
- For some women with additional care needs, a standard proforma, such as: vaginal birth after Caesarean section may be available clearly identifying the recommended care package. If there is one available women should be asked to sign this and a copy filed within the

maternity record.

- A clinical alert containing clear management plan should be completed and sent to all midwives who may care for the woman, the senior midwifery manager, the Head of Midwifery and consultant midwife employed by the appropriate Health Board. This should be completed at the earliest opportunity so any concerns midwives raised can be addressed.
- A care plan must be completed in the handheld records to maximize the safety of both woman and baby. In the event of this care plan not being fulfilled, the woman needs to be encouraged to transfer to an obstetric unit.
- Labour notes must be maintained in full. It is not appropriate to use the All Wales Clinical pathway for Normal Labour documentation.
- Relevant information must be shared with the appropriate manager for the ambulance service.
- When the woman is in “labour” inform the obstetric unit so that the consultant obstetrician can be informed.
- During the postnatal period the midwives should offer the family an opportunity to discuss their care.

Postnatal

Full Clinical assessment

Assess any relevant issues/special considerations arising in the antenatal, intrapartum and immediate postnatal period see Appendix 16 for the criteria for referral to medical staff in the postnatal period. Ideally the assessment should take place in the antenatal period or as soon as possible after birth.

The full assessment should include:

- Plans for the postnatal period.
- Details of the specialist healthcare professionals expected to be involved in the woman’s care and that of her baby, including roles and contact details.
- Document any care issues or special considerations for the post birth period.

Process for Referral in the Postnatal Period

If there are concerns in the postnatal period the midwife as the coordinating health care professional should refer to the obstetric team, the GP or another team as appropriate.

Management of an Unexpected Intrauterine or Neonatal Death

Intrauterine death:

In the event of a woman attending the MLU where an intrauterine death is suspected, arrangements should be made to transfer her to the obstetric unit, by initiating the emergency transfer policy. It is important to liaise with both the senior midwifery and medical staff in the obstetric unit prior to transfer, ensuring that the situation is made clear.

Document all actions taken with outcomes and explain all events to the woman and her family.

Complete clinical incident forms.

Definitions

A live birth

The World Health Organisation defines a live birth as the complete expulsion or extraction from its mother of a product of conception irrespective of the duration of pregnancy, which after such separation breathes or shows any other evidence of life such as definite heart beat, umbilical cord pulsation or definite movement of voluntary muscle whether the umbilical cord has been cut or the placenta is attached. Each product of such a birth is considered live born and by law should be registered as such. Thus a birth certificate would need to be issued (whatever the gestation).

Stillbirth

A stillborn infant is one of 24 weeks gestation or over, which following the complete expulsion or extraction from its mother shows none of the signs of life listed above.

Late fetal loss

A late fetal loss is a baby born between 21 to 23 weeks plus 6 days who shows no signs of life at or after birth.

Margins of viability

A baby who is viable is one who is thought to be capable of living over a period of time outside the womb.

Below 23 weeks, where the gestation is certain, it is current standard UK practice and considered in the best interests of the baby that resuscitation is not considered or offered. These babies are considered pre viable. If a baby is born showing signs of life below 23 weeks, as long as the gestation is certain, we normally offer comfort care only.

If the gestation is unknown and the baby looks a reasonable size (at least 500g), then resuscitation should be commenced and advice sought from the nearest Neonatal Intensive Care Unit (NICU).

23 weeks - 23 weeks + 6 days

Babies born at this gestation are considered on the borderline of viability. Standard practice is that the baby is assessed and unless the parents wish otherwise, resuscitation attempts are made. If the response is poor or there is no response, then resuscitation can be discontinued. EMRTS can make this decision if they are attendance. If the response is good then intensive care should be provided and arrangements made for the baby to be transferred to the nearest appropriate NICU as soon as possible.

23+6 weeks and above

Unless the newborn infant is obviously macerated, or has serious congenital abnormalities, these babies are considered viable. It is usual practice to attempt resuscitation and to continue for a reasonable length of time.

There is an option to discontinue resuscitation if after at least 15-20 minutes of effective resuscitation there is no heart rate. If there is a slow heart rate at this stage, advice should be sought.

Premature births below 37 weeks would never be planned in a freestanding MLU or in the community.

If a woman presented before 37 weeks, unless she was in advanced labour, she would be transferred to an obstetric unit

Premature births in the community or at a freestanding MLU will be unplanned births or concealed pregnancies.

Procedure for Freestanding MLU's and home births where baby needs active resuscitation at birth or is stillborn.

When a midwife needs to administer a second series of inflation breaths and a baby requires active resuscitation a 999 call should be put out as soon as possible.

Normally between the hours of 0800 and 2000 hours EMRTS personnel will attend or oversee the management.

Documentation must be as complete as possible. If a baby is born alive or shows any signs of life then the baby will require its own set of notes. Healthcare professionals can write on continuation sheets, to be included in neonatal hospital notes when issued.

If stillborn, or the pregnancy ends in a late fetal loss, then the details of the baby and its management are usually recorded in the mother's notes in a separate neonatal section or on a continuation sheet.

The EMRTS consultant has the authority to pronounce life extinct and record this information, prior to moving the baby. If the EMRTS team is not in attendance then ongoing resuscitation management should continue until the baby arrives at a NICU and is reviewed by a neonatologist.

If resuscitation is ongoing, the baby should be stabilized as far as possible by either the midwives or the EMRTS team before moving the baby. Help and advice may be sought from the neonatologist on duty for Cymru Inter hospital Acute Neonatal Transfer Service (CHANTS) or NICU if required.

In all cases of stillbirth and neonatal death (including late fetal losses at 22 and 23 weeks), the mother and baby should be taken to an obstetric unit at the earliest opportunity. There the mother can be assessed by an obstetrician, bereavement counseling can be offered and discussions can ensue regarding the next stages and whether a postmortem investigation of the baby is desirable or required. All necessary documentation can also be completed.

Note - investigations such as bloods or other tissue should not be taken from the baby after death, unless done on premises which are licensed for post mortem examinations (Human Tissue Act).

Certification and other procedures

All babies including still births and neonatal deaths should have their birth weight and head circumference documented in the notes. The sex of the infant should be recorded. A physical examination should be recorded. If the sex is indeterminate please see below.

22 – 23 weeks

If there was no sign of life after birth, this is a late fetal loss, and no certificate needs to be issued. Clinical information regarding the baby should be documented in the mother's notes by the EMRTS personnel and/or the midwife.

If there were signs of life after birth but the baby then died then this is a neonatal death. Neonatal notes should be issued. A death certificate may be issued by the doctor who saw the baby alive and after death. This will usually be the EMRTS consultant if in attendance, but it may not be practical to issue this at the time of death. . Usually the cause of death is extreme prematurity.

24 weeks onwards

Stillbirths are outside the jurisdiction of the Coroner. If the baby is stillborn, a stillbirth certificate must be completed by the midwife or obstetrician. The clinical information should be documented in the mother's notes under a section for the baby.

If there were signs of life at birth or after birth following which the baby died, then a live birth and a neonatal death need to be registered. Only a doctor who saw the baby both before and after death is able by law to issue this certificate. If no doctor saw the baby both alive and after death then a referral will need to be made to the Coroner.

Other reporting and procedures following the death

It is essential that the duty EMRTS consultant at the time of death passes their contact details to the receiving hospital. Ideally within 24 hours (excluding weekends and bank holidays) a review should be held including EMRTS consultant, paramedic, midwife, consultant neonatologist and the named professional for safeguarding. The purpose of this meeting is to discuss the cause of death and whether a death certificate can be issued. It

will be the receiving centre's responsibility to organize the meeting which can be undertaken by video conferencing or telephone if desired.

This meeting must also decide whether the Procedural Response to Unexpected Death in Childhood or Infancy Investigation (PRUDIC) is applicable.

A PRUDIC is required for;

- any unattended birth/ born before arrival (BBA), (no professional in attendance),
- a concealed pregnancy,
- a case where no one can issue a death certificate
- or where there is Coroner involvement.

A PRUDIC is not required for late fetal losses or stillbirths where there is a health care professional in attendance at the birth.

In an unattended birth where there was doubt whether the baby was still or live born there should be a PRUDIC.

Note - if the sex of the infant is indeterminate then a death certificate cannot be completed and the case needs to be discussed with the Coroner.

It is important to explain sensitively to the parents the requirement for the PRUDIC procedure including the involvement of the police, and referral to the Coroner when this decision has been made. The responsibility for this lies with the receiving unit.

All neonatal deaths and stillbirths after 22 weeks gestation are to be reported to Mothers and Babies: Reducing Risk through Audits and Confidential Enquiries across the UK (MBARRACE) by the midwife, obstetrician or neonatologist. There is usually a lead for MBRRACE in each unit who should be informed.

The death should be recorded on DATIX as a clinical incident and a root cause analysis undertaken. Responsibility would lie with the obstetric and maternity staff for a stillbirth and the neonatal department for a neonatal death.

There should be a later structured review, following the Root Cause Analysis (RCA) which involves the EMRTS, midwifery staff and the neonatal team to discuss the management and whether there are lessons to be learnt or changes needed to any guidance.

Clinical Governance Arrangements

The following bullet points of clinical governance are expected to be implemented in all areas where the midwife is the lead professional. This document will consider clinical risk management and audit processes, although local arrangements should be in place to address the other pillars of governance: education and training needs, involvement of consumers, health and safety and reporting structures.

Clinical governance structures should be implemented in all places of birth. (NICE, 2014).

Multidisciplinary governance structures should be in place to enable the oversight of all places of birth. The clinical governance group should include appropriate representation involved in the provision of care locally, such as representatives from the following teams:

- midwifery.
 - Obstetric.
 - Anesthetic.
 - Neonatal.
 - Clinical supervisor.
 - A representative from the local maternity services liaison committee and/or a „user“ of the service.
-
- Midwives have a responsibility to keep up to date and develop their skills in order to maintain competency and experience. This should include regular training in obstetric emergencies and neonatal life support as well as in recognizing the ill neonate. (BAPM 2011).
 - There should be agreed criteria for women planning to give birth in each setting.
 - Information should be available to all women regarding local maternity services.
 - Clear referral systems should be in place for midwives who wish to seek advice on the care of women whom they consider may have risk factors, but who wish to labour outside an Obstetric unit. A senior member of the midwifery team, a consultant midwife should be identified to fulfil this role, and clear referral pathways need to be established. There should also be clear pathways for emergency neonatal care. (BAPM 2011).

-
- If an obstetric or neonatal opinion is deemed necessary, this should be obtained from a consultant or a doctor with appropriate experience.
 - All healthcare professionals involved should document their discussions with the woman about her chosen place of birth in the hand-held maternity record.
 - In all places of birth, the processes of clinical assessment in the antenatal period and when labour commences should be subjected to continuous audit.
 - Clear pathways for, and local agreements on, the process of transfer to, an Obstetric unit or NICU should be established, including provision the continued care of women and their babies. There should be no barriers to rapid transfer when required in an emergency. These pathways should include arrangements to be used when the nearest obstetric or neonatal unit is closed to admissions.
 - If the emergency is such that transfer is not immediately possible or the EMTRS can be on site sooner than transfer to hospital can be achieved, assistance should be sought from any appropriately trained staff available and the EMTRS team.
 - Monthly numbers of women booked, admitted to, being transferred from and giving birth in each place of birth should be audited. This should include maternal and neonatal outcomes with a comparison to the Birthplace study perinatal adverse outcomes (2011).
 - There should be continuous audit of the appropriateness of the reason for and speed of transfer (The transfer form is included in the All Wales Clinical Pathway for normal labour 2013). If women who gave birth in the MLU had indications for transfer, and if so, why the transfer did not occur, should be included in the audit. The audit should also include the time taken to provide immediate treatment, to see a specialist obstetrician and the time from admission to birth once transferred (if appropriate).
 - There should be locally agreed robust systems in place for incident reporting, investigating and identifying key lessons to be learnt. Themes and trends identified through this process should be acted upon promptly and effectively through midwifery management, midwifery supervision, training and service evaluation.
 - The clinical governance group should be responsible for ensuring detailed root-cause analyses are carried out of any serious maternal or neonatal outcomes (for example, intrapartum-related perinatal death or seizures in

the neonatal period). The groups should consider any “near misses” identified through the risk management systems.

Data must be submitted to the national registries.

Neonatal Clinical Examination

Each baby should have a full clinical examination by a competent clinician as soon as possible after birth. This should include an examination of the eyes and the hips.

Before commencing the examination, the maternal case notes should be reviewed to identify any risk factors for the neonate.

Particular attention should be paid to whether there are indications for a BCG vaccination. Each MLU should have an agreed pathway for referral of such babies to ensure that these vaccinations are not missed.

The MLU should agree with its associated neonatal units, pathways for referral of babies where there is a family history of a first degree relative with hip dysplasia, or the baby was in the breech position for a significant period of time during the pregnancy.

Appendix 1: Assessment for Choosing Place of Birth

[Taken from NICE 2014 Intrapartum Care- updated Nice 2017]

Medical conditions and other factors that may affect planned **place of birth**

Use tables 1, 2, 3, and 4 as part of an assessment for a woman choosing her planned place of birth.

Table 1 and 2 show medical conditions or situations in which there is increased chance of adverse outcome for the woman or baby during or shortly after labour where care in an OU would be expected to reduce this chance.

The factors listed in tables 3 and 4 are not reasons in themselves for advising birth within an OU but indicate that further consideration of birth setting may be required.

Discuss the chance of adverse outcome and the additional care that can be provided in the OU with the woman so that she can make an informed choice about the planned place of birth.

Medical conditions indicating increased chance of complications suggesting planned birth at an obstetric unit.

Table 1

Disease Area	Medical Condition
Cardiovascular	Confirmed cardiac disease. Hypertensive disorders.
Respiratory	Asthma requiring an increase in treatment or hospital treatment. Cystic fibrosis.
Haematological	Haemoglobinopathies – sickle-cell disease, beta-thalassaemia major. History of thromboembolic disorders. Immune thrombocytopenia purpura or other platelet disorder or platelet count below 100×10^9 /litre. Von Willebrand's disease. Bleeding disorder in the woman or

	<p>unborn baby.</p> <p>Atypical antibodies which carry a risk of haemolytic disease of the newborn.</p>
Endocrine	<p>Hyperthyroidism.</p> <p>Diabetes.</p>
Infective	<p>Risk factors associated with group B streptococcus whereby antibiotics in labour would be recommended.</p> <p>Hepatitis B/C with abnormal liver function tests.</p> <p>Carrier of/infected with HIV.</p> <p>Toxoplasmosis – women receiving treatment.</p> <p>Current active infection of chicken pox/rubella/genital herpes in the woman or baby.</p> <p>Tuberculosis under treatment.</p>
Immune	<p>Systemic lupus erythematosus.</p> <p>Scleroderma.</p>
Renal	<p>Abnormal renal function.</p> <p>Renal disease requiring supervision by a renal specialist.</p>
Neurological	<p>Epilepsy.</p> <p>Myasthenia gravis.</p> <p>Previous cerebrovascular accident.</p>
Gastrointestinal	<p>Liver disease associated with current abnormal liver function tests.</p>
Psychiatric	<p>Psychiatric disorder requiring current inpatient care.</p>

Other factors indicating increased chance of additional care needs suggesting planned birth at an obstetric unit.

Table 2

Factor	<i>Additional Information</i>
Previous complications	<p>Unexplained stillbirth.neonatal death or previous death related to intrapartum difficulty.</p> <p>Previous baby with neonatal encephalopathy.</p> <p>Pre-eclampsia requiring preterm birth.</p> <p>Placental abruption with adverse outcome.</p> <p>Eclampsia.</p> <p>Uterine rupture.</p> <p>Primary postpartum haemorrhage requiring additional treatment or blood transfusion.</p> <p>Retained placenta requiring manual removal in theatre.</p> <p>Caesarean section.</p> <p>Shoulder dystocia.</p>
Current pregnancy	<p>Multiple birth.</p> <p>Placenta praevia.</p> <p>Pre-eclampsia or pregnancy-induced hypertension.</p> <p>Preterm labour or preterm prelabour rupture of membranes.</p> <p>Placental abruption.</p> <p>Anaemia – haemoglobin less than 85 g/litre at onset of labour.</p>

	<p>Confirmed intrauterine death.</p> <p>Induction of labour.</p> <p>Substance misuse.</p> <p>Alcohol dependency requiring assessment or treatment.</p> <p>Onset of gestational diabetes.</p> <p>Malpresentation – breech or transverse lie.</p> <p>BMI at booking of greater than 35 kg/m².</p> <p>Recurrent antepartum haemorrhage.</p> <p>Small for gestational age in this pregnancy (less than fifth centile or reduced growth velocity on ultrasound).</p> <p>Abnormal fetal heart rate/Doppler studies.</p> <p>Ultrasound diagnosis of oligo-/polyhydramnios.</p>
Previous gynaecological history	<p>Myomectomy.</p> <p>Hysterotomy.</p>

Medical conditions indicating individual assessment when planning place of birth.

Table 3

Disease Area	Medical Condition
Cardiovascular	Cardiac disease without intrapartum implications.
Haematological	Atypical antibodies not putting the baby at risk of haemolytic disease. Sickle-cell trait. Thalassaemia trait. Anaemia – haemoglobin 85-105 g/litre at onset of labour.
Infective	Hepatitis B/C with normal liver function tests.
Immune	Non-specific connective tissue disorders.
Endocrine	Unstable hypothyroidism such that a change in treatment is required.
Skeletal/neurological	Spinal abnormalities. Previous fractured pelvis. Neurological deficits.
Gastrointestinal	Liver disease without current abnormal liver function. Crohn's disease. Ulcerative colitis.

Other factors indicating individual assessment when planning place of birth. Table 4

Factor	Additional Information
Previous complications	<p>Stillbirth/neonatal death with a known non-recurrent cause.</p> <p>Pre-eclampsia developing at term.</p> <p>Placental abruption with good outcome.</p> <p>History of previous baby more than 4.5 kg.</p> <p>Extensive vaginal, cervical, or third, or fourth-degree perineal trauma.</p> <p>Previous term baby with jaundice requiring exchange transfusion.</p>
Current pregnancy	<p>Antepartum bleeding of unknown origin (single episode after 24 weeks of gestation).</p> <p>BMI at booking of 30-35 kg/m².</p> <p>Blood pressure of 140 mmHg systolic or 90 mmHg diastolic or more on two occasions.</p> <p>Clinical or ultrasound suspicion of macrosomia.</p> <p>Para 4 or more.</p> <p>Recreational drug use.</p> <p>Under current outpatient psychiatric care.</p> <p>Age over 35 at booking.</p>
Fetal indications	Fetal abnormality.
Previous gynaecological history	Major gynaecological surgery.

	Cone biopsy or large loop excision of the transformation zone. Fibroids.
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Appendix 2: Cord Prolapse.

When a cord prolapse is diagnosed on vaginal examination, pressure on the cord must be relieved if it is still pulsating. Therefore the midwife who is performing the vaginal examination must not remove the examining fingers. The aim is to hold the presenting part off the cord particularly through a contraction.

What is the optimal management in a community setting?

Women should be advised, over the telephone if necessary, to assume the knee-chest face-down position while waiting for a hospital transfer. During the emergency ambulance transfer, the knee-chest is potentially unsafe and the left-lateral position should be used. All women with a cord prolapse should be advised to be transferred to the nearest consultant led obstetric unit for delivery, unless an immediate vaginal examination by the midwife reveals that a spontaneous vaginal delivery is imminent. Preparations for transfer should still be made. (RCOG 2014).

- Call for urgent assistance.
- Keep the woman and her family aware of the ongoing circumstances.
- During emergency ambulance transfer, the knee–chest position is potentially unsafe and the exaggerated Sims position (left lateral with pillow under hip) should be used.
- All women with cord prolapse should be advised to be transferred to the nearest consultant-led unit for birth, unless an immediate vaginal examination by a competent professional reveals that a spontaneous vaginal birth is imminent.
- The presenting part should be elevated during transfer either manually or by using bladder distension. It is recommended that community midwives carry a Foley catheter for this purpose and equipment for fluid infusion.
- To prevent vasospasm, there should be minimal handling of loops of cord lying outside the vagina. (RCOG 2014). Document – ensure accurate records are made as soon as possible.

Action:

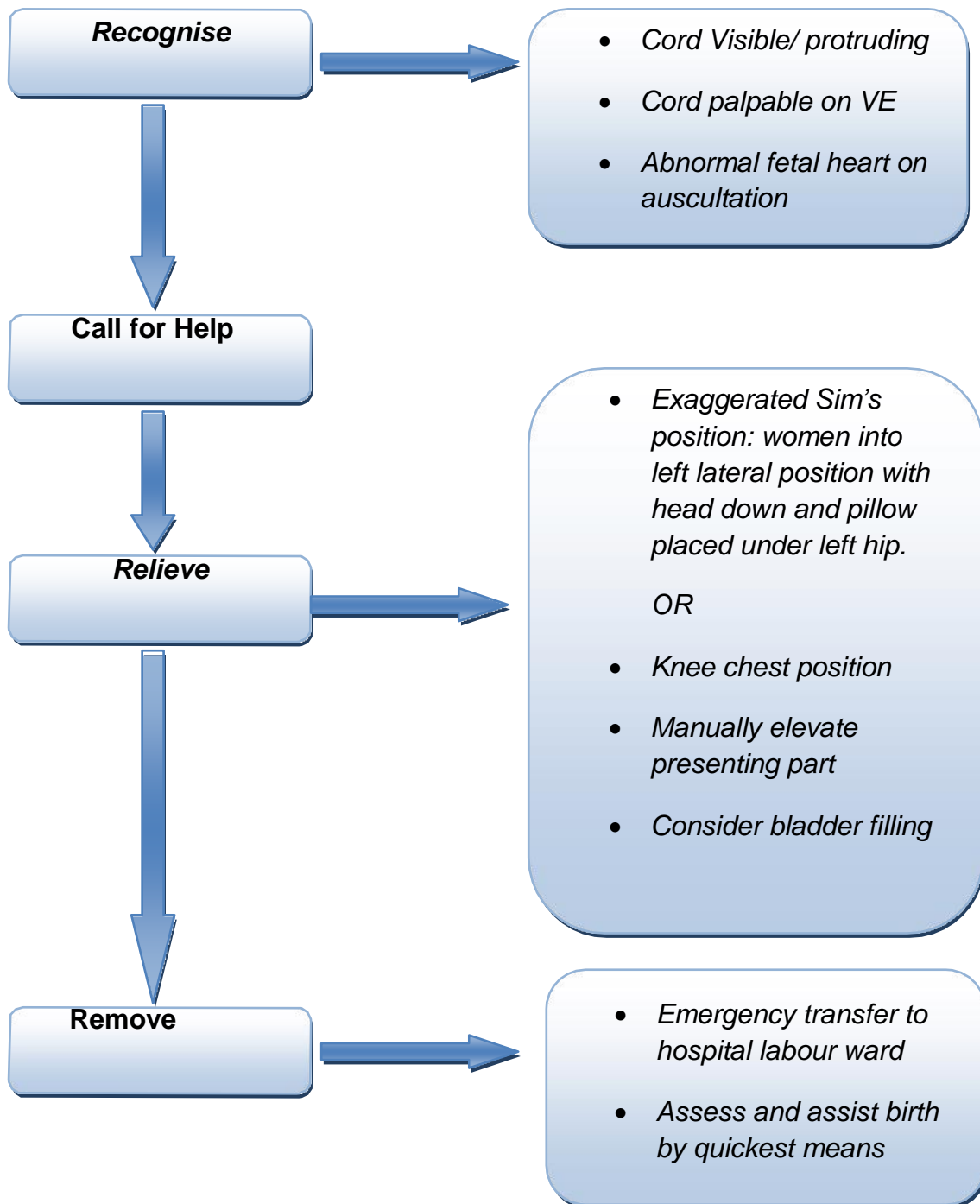


Figure 1: Outline management of cord prolapsed [PROMT Manual Winter et al 2012]

Appendix 3: Shoulder Dystocia

Shoulder dystocia is defined as a vaginal cephalic delivery that requires additional obstetric manoeuvres to deliver the fetus after the head has delivered and gentle traction has failed. Shoulder dystocia occurs when either the anterior or less commonly the posterior fetal shoulder impacts on the maternal symphysis, or sacral promontory, respectively. There is a wide variation in the reported incidence of shoulder dystocia. Studies involving the largest number of vaginal deliveries (34,000 to 267,000 reported incidences between 0.58% to 0.70%). (RCOG 2012).

Factors associated with shoulder dystocia

- Previous shoulder dystocia.
- Macrosomia greater than 4.5kg.
- Diabetes mellitus.
- Maternal body mass index of greater than 30kg/m².

Intrapartum

- Prolonged first stage of labour.
- Secondary arrest.
- Prolonged second stage of labour.
- Oxytocin augmentation.
- Assisted vaginal delivery (RCOG 2012).

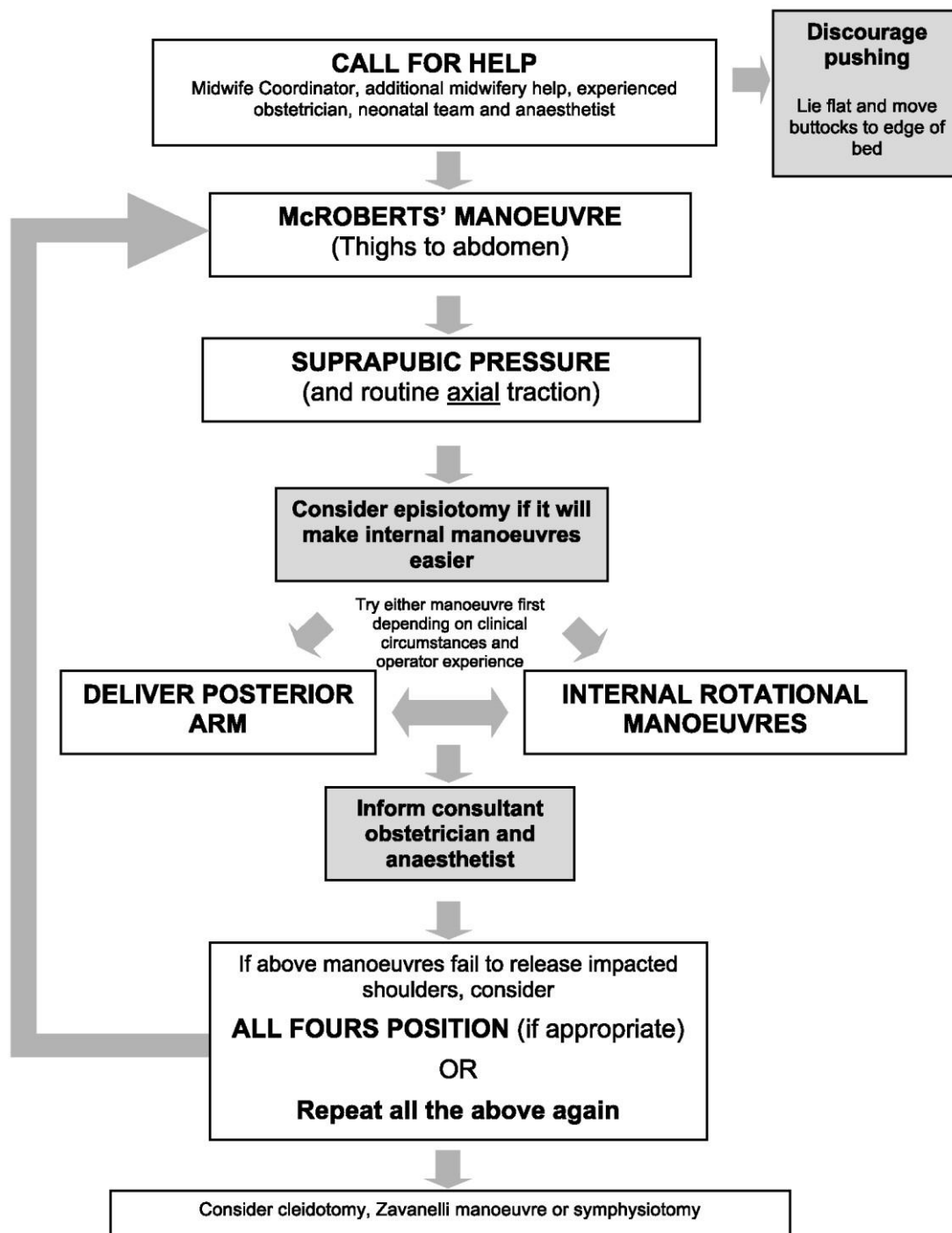
Timely management of shoulder dystocia requires prompt recognition. The attendant health carer should routinely observe for:

- Difficulty with delivery of the face and chin.
- The head remaining tightly applied to the vulva or even retracting (turtle-neck sign).
- Failure of restitution of the fetal head.
- Failure of the shoulders to descend.

Routine traction in an axial direction can be used to diagnose shoulder dystocia but any other traction should be avoided. Routine traction is defined as the traction required for delivery of the shoulders in a normal vaginal

delivery where there is no difficulty with the shoulders". Axial traction is traction in line with the fetal spine i.e. without lateral deviation.

Algorithm for the management of Shoulder Dystocia

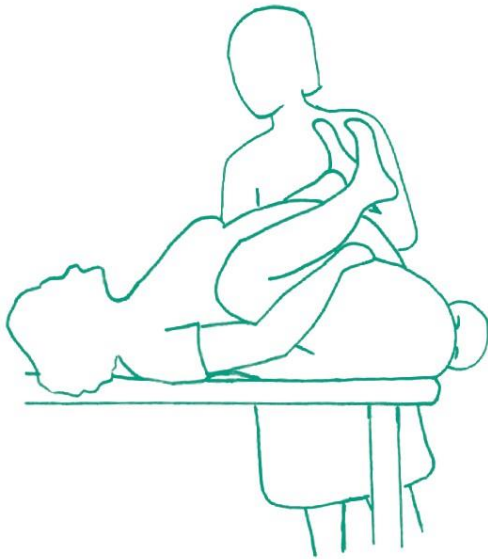


Baby to be reviewed by neonatologist after birth and referred for Consultant Neonatal review if any concerns

DOCUMENT ALL ACTIONS ON PROFORMA AND COMPLETE CLINICAL INCIDENT REPORTING FORM.

Figure 2: Management of shoulder dystocia (RCOG Green top guidelines 2012)

Immediate action diagrams



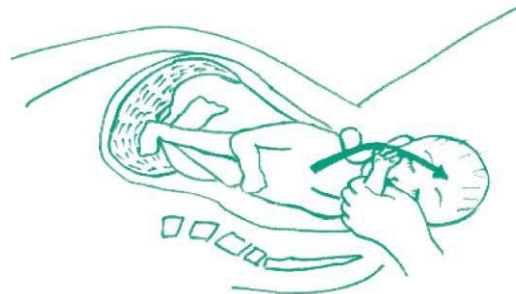
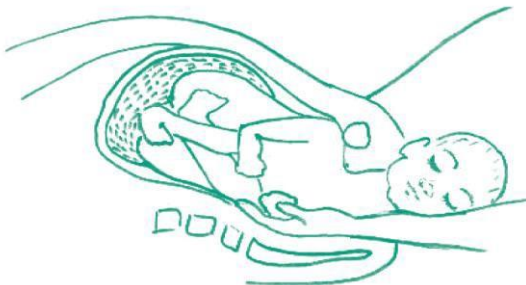
SaFE study)

The McRoberts' manoeuvre (from the



study)

Suprapubic pressure (from SaFE



Delivery of the posterior arm (from the SaFE study)

(RCOG 2012)

Internal manoeuvres:

The aim of Internal manoeuvres is to rotate the fetal shoulders into a wider pelvic diameter traditionally known as woodscrew or Rubin's manoeuvres. This requires the birth attendant to insert the whole hand into the most spacious part of the sacral hollow by screwing up the hand as if to put on a bracelet described by Winter et al [2012] as the Pringles manoeuvre. Rotation is usually easier if the attendant presses on the anterior or posterior aspect of the posterior shoulder. Rotation into a wider pelvic diameter should be achieved. If pressure in one direction does not free the obstruction rotation in the opposite direction can be attempted. [Prompt Manual Winter et al 2012].

All attendants must be prepared for PPH/neonatal resuscitation and follow guidelines for obstetric/ neo-natal transfer to consultant led unit.

Calling for emergency ambulance transfer should NOT be delayed, if the baby is delivered quickly and in good condition, then the paramedics can be cancelled. This is preferable to delaying the call and waiting extra precious minutes for transport to arrive.

The activation of the transfer policy in any emergency situation should NEVER be delayed – these are time critical incidents.

Documentation including accurate records of time is essential see appendix 4 for example performance.

Appendix 4: Shoulder Dystocia Documentation Proforma

Addressograph

Date:

Time:

Person completing the form:

	Name	Time
Staff present at delivery of head		
Staff present at delivery of shoulders		
Time of delivery of head		
Time of delivery of shoulders		
Time handed over to DGH/ consultant unit staff		

Procedures used to assist delivery: These are not written in any order of importance but should be carried out as clinically indicated.	By Whom	Time	Details Write or circle option used	Reason if not performed
McRoberts				
Traction			Routine Axial	
Subrapubic pressure			Maternal right/ left	
Episiotomy				
Delivery of posterior arm			Right / Left	
Internal rotation				
All fours position				
Other maneuvers tried/ repeated				

Assessment of baby	Details		
Apgars	1 min	5 min	10 min
Resuscitation required			
Physical signs of potential injury			

Appendix 5: Major Haemorrhage

Please refer to All Wales management of Obstetric Haemorrhage guidelines. Obs Cymru. This is an example of paperwork.



Patient addressograph

PPH Management Checklist for MLU

This checklist is not designed to be comprehensive but to facilitate an appropriately escalating multidisciplinary team

Date _____ approach to PPH Time ____:____ Ward/location _____

Stage 0

PPH risk assessment for all women

(as per initial assessment from All Wales Clinical Pathway for Normal Labour)

Stage 1

>500mL blood loss

Mobilise Help

2nd Midwife alerted

Consider transfer to consultant led unit

Notify midwife in charge of consultant led unit Name: _____

Act

Measure & record blood loss

Monitor patient

IV access

Take bloods (FBC, U&E, Coag and Cross Match) if not done earlier

Give ranitidine

Think of possible causes

Tone, Trauma, Tissue, Thrombin (please circle causes)

Treat

Uterine massage

Empty bladder

Put baby to breast (if appropriate)

Inspect genital tract

Placenta - check delivered & complete

Bimanual compression (if placenta delivered)

	Time ____:____	Time ____:____	Time ____:____	Time ____:____	Time ____:____	Time ____:____
Pulse						
BP						
Measured Blood Loss						
Respirations						

Stage 2 >1000mL blood loss or clinical concern (eg. abruption or concealed bleeding) or abnormal vital signs (RR > 30, HR >120, BP <90/40mmHg, O2 sat <95%). Immediate

Stage 3 > 1500mL blood loss or on-going clinical

concern

Appendix 6: Imminent Breech Birth

“Where a woman presents with an unplanned vaginal breech labour, management should depend on the stage of labour, whether factors associated with increased complications are found, availability of appropriate clinical expertise and informed consent.” {RCOG 2017}

If breech presentation is detected in labour in a midwife led care setting and if time permits the woman should be transferred to the Obstetric unit.

Imminent delivery:-

- Call for assistance if second midwife not in attendance (may need to call in other midwives to support transfer).
- Make arrangements for transfer– post delivery transfer may be needed by either mother or baby. (Appendix 18).
- Remember many complications associated with vaginal breech deliveries can be attributed to operator interference –

Management: –

- Warm room ensure resuscitation equipment is prepared.
- Either a semirecumbent or an all-fours position may be adopted for delivery and should depend on maternal preference and the experience of the attendant. If the latter position is used, women should be advised that recourse to the semirecumbent position may become necessary. [RCOG 2017]
- Confirm cervix is fully dilated and catheterise to empty bladder.
- Episiotomy is recommended, to allow manipulations as required.
- Allow the woman to push at her own rate facilitating a steady descent. As buttocks distend the perineum, the anterior & posterior buttocks follow quite quickly. Meconium is not unusual at this stage.
- Allow to deliver to thorax, with NO interference – **Hands off the breech** [Stables and Rankin, 2010]. Traction may cause head extension and displacement of the arms above the head.
- Allow legs to deliver spontaneously, or gently insert a finger behind the knee to enable knee flexion and thigh abduction.
- The arms will normally escape one by one, however assistance, without traction, is required if there is delay or evidence of poor fetal condition. All obstetricians and midwives should be familiar with the techniques that can be used to assist vaginal breech birth. The choice of manoeuvres used, if required to assist with delivery of the breech, should depend on the individual

experience/preference of the attending doctor or midwife. [RCOG 2017]

- Signs that delivery should be assisted include lack of tone or colour, or delay, commonly due to extended arms or an extended neck. In general, intervention to expedite breech birth is required if there is evidence of poor fetal condition or if there is a delay of more than 5 minutes from delivery of the buttocks to the head, or of more than 3 minutes from the umbilicus to the head. [RCOG 2017]

BUT – Only grasp baby around the pelvis.

Only if necessary apply traction at a downward 45 degree angle, baby's back to face upwards if woman is semi-recumbent, to allow head to enter the pelvis occipito anterior- if the woman is in an all-fours position, the baby's chest will be visible.

- Rotate body into the oblique until tip of scapula appears.
- Sweep the anterior arm down across the chest and out.
- Reverse manoeuvre for the other arm.
- Allow the breech to hang until the nape of the neck or nose is visible. Do not attempt delivery of the head before this is visible.
- Delivery of head – by modified Mauriceau Smellie Veit manoeuvre.
- Support the baby's body over the birth attendants arm.
- One hand with one finger in the vagina placed on the occiput and one finger on each of the shoulders.
- Other hand beneath the baby with 2 fingers on the maxillae – not in the baby's mouth.
- Head is flexed through the pelvis by the occipito finger applying flexing pressure on the occiput, and the fingers on the maxillae applying pressure on the lower face.
- The body is raised upwards in a large arc.
- The baby's head is gently to expose the face and the rest of the head can be delivered slowly and placed on mother's abdomen.
- An alternative is the routine use of the Bracht manoeuvre, following spontaneous delivery to the level of the umbilicus, the body is grasped in both hands keeping the legs flexed against the baby's abdomen and, without traction, is brought up against the symphysis pubis, frequently accompanied by suprapubic pressure. [RCOG 2017]

Appendix 8: Breech Birth Documentation Proforma

Mother's Addressograph

Record of care to be filed in notes

Warm room, warm towels, prepare resuscitation area	CALL FOR HELP	
Date	Time	Signature
Breech presentation diagnosed/ 2 nd midwife / other help alerted		
Moved into appropriate position for delivery		
Confirmed cervix to be fully dilated		
Bladder emptied		
Buttocks visible Keep hands off baby		
Buttocks distending perineum		
Consider / perform episiotomy		
Buttocks delivered		
Legs delivered		
Apex rate		
Arms delivered		
Wait to see nape of neck		
Mauriceau-Smellie-Veit manoeuvre		
Head delivered		
Other care		

Appendix 9: Uterine Inversion

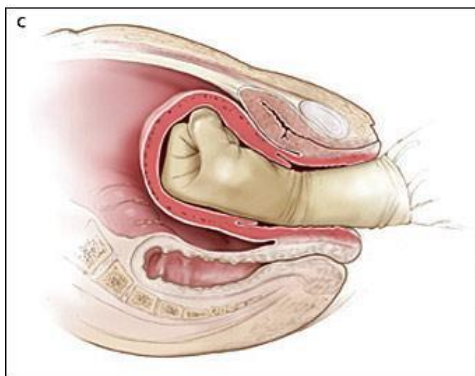
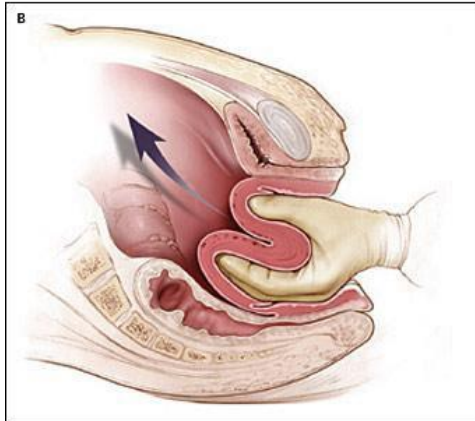
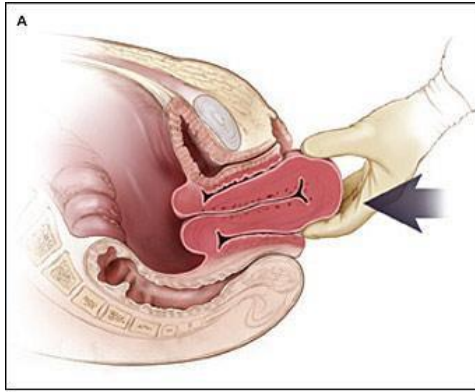
Acute uterine inversion is a rare and unpredictable emergency. Shock and uterine replacement must be addressed simultaneously. There is a relatively small evidence base for how to treat this condition. [RCOG 2009].

94% of cases present with haemorrhage – with or without shock. The key to successful outcome is team work as resuscitation and replacement of the uterus needs to be undertaken simultaneously.

Symptoms and signs include:

Severe lower abdominal pain during the third stage and maternal haemorrhage is usually present. Shock is out of proportion to the blood loss due to increased vagal stimulation. Placenta may or may not be in situ. Uterus may not be palpable per abdomen. The cervix or uterus may be visible at the introitus or a mass found on vaginal examination.

Once diagnosis has been made prompt uterine replacement is best done manually. (RCOG 2009).



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(www.aafp.org)

Flow chart to indicate action required.

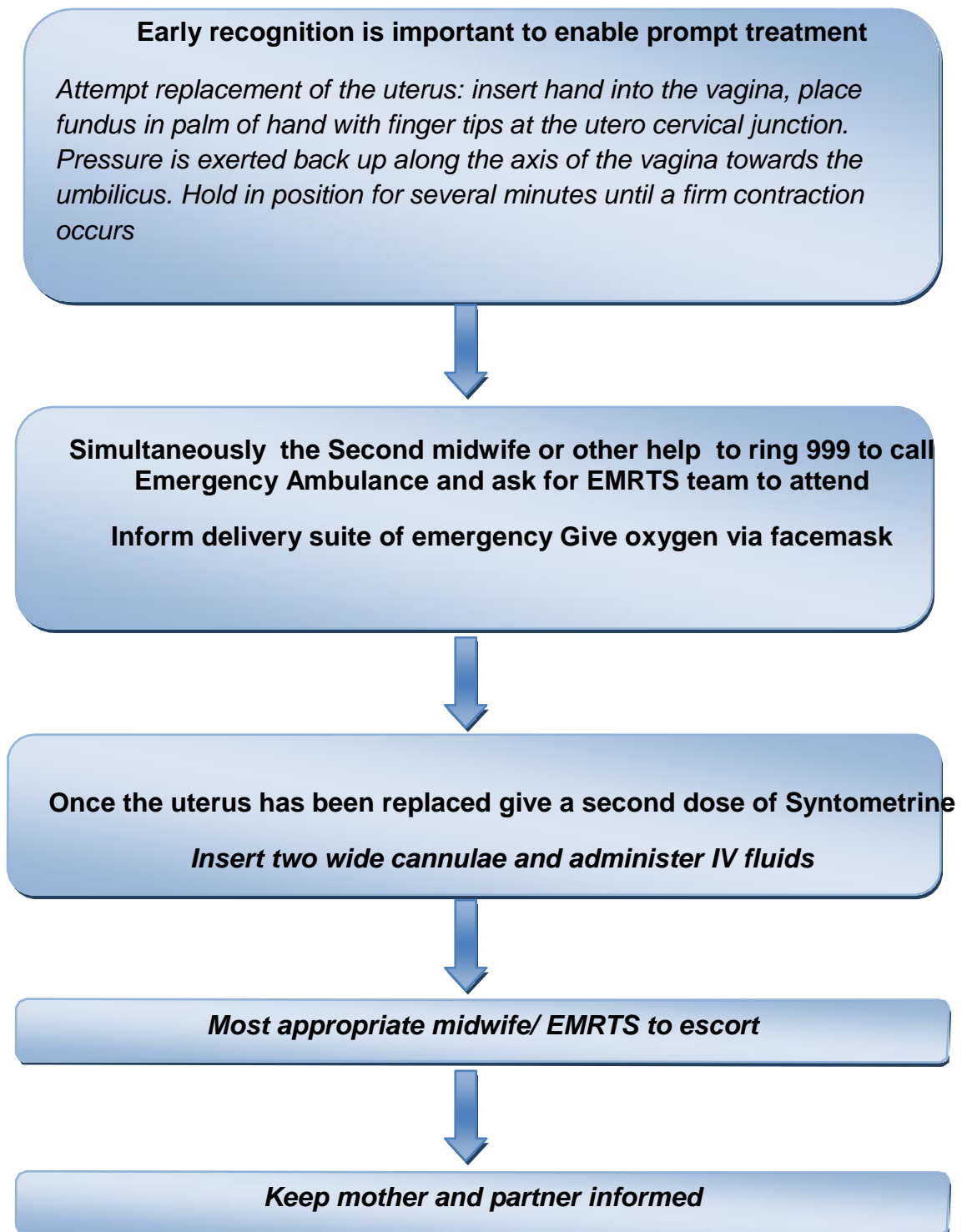


Figure 3: Action for uterine inversion (Boyle 2011)

Appendix 10: Newborn Life Support

Head in neutral position

Use a well fitting face mask

Each breath 2-3 seconds duration at 30 cm H₂O for a term baby.

Get help from a second person:

to support the airway in a double jaw thrust,

or establish airway using an LMA (laryngeal mask airway)

Chest compression

Compression: ventilation ratio of 3:1

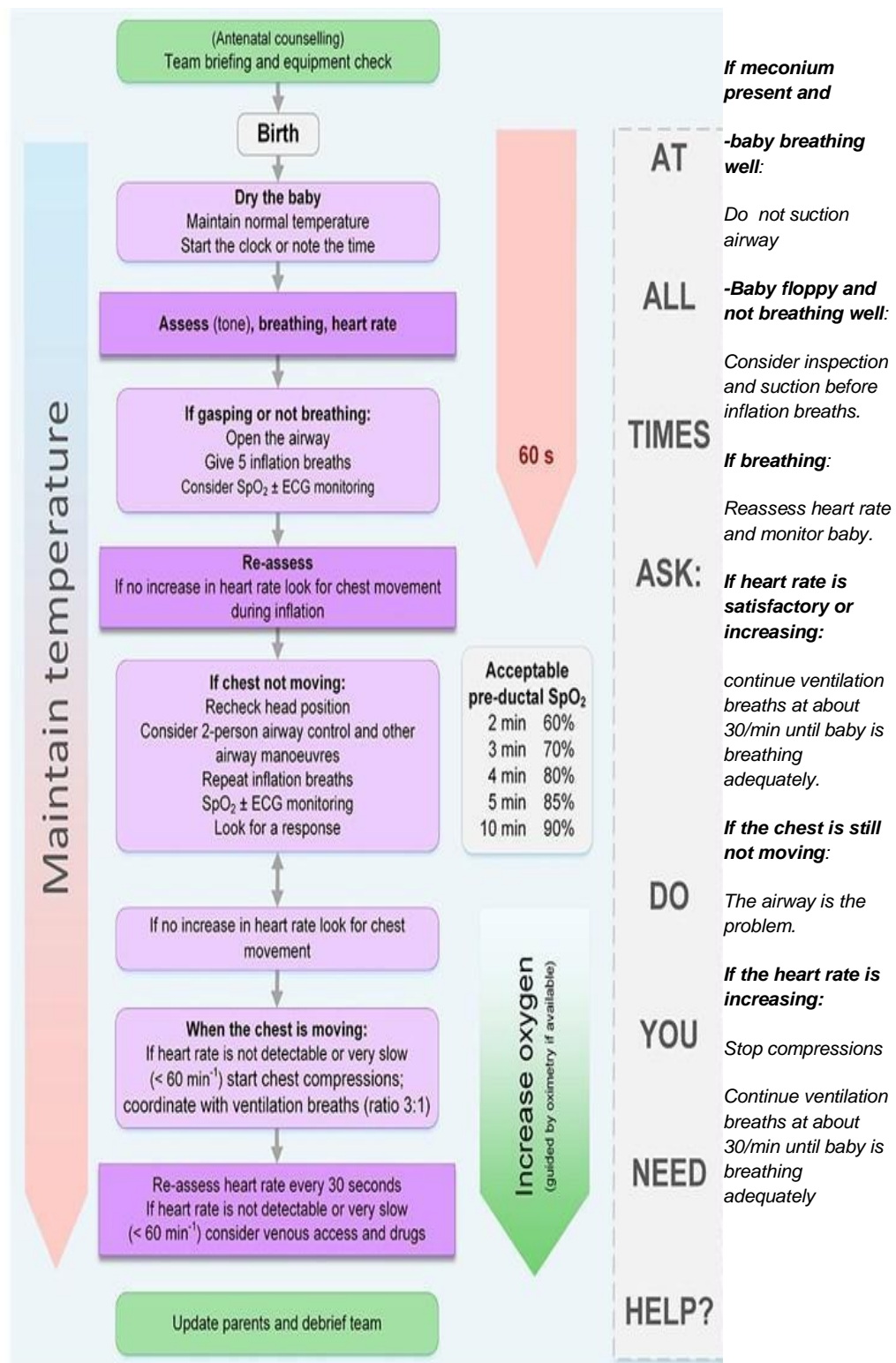


Figure 4: Newborn life support algorithm (Resuscitation Council UK 2015)

Also:

1. Reassure parents and keep them informed of action.
2. If possible double clamp the cord to enable blood gases to be taken (within 30 minutes).
3. Midwife will maintain appropriate documentation.
4. Midwife to contact neonatal unit to arrange transfer.
5. Ensure extra midwifery staff is available to offer support, arrange equipment for transfer.
6. Baby will require identification bands prior to transfer.

Ref: Resuscitation Council (UK).

Appendix 11: Neonatal Resuscitation Documentation Proforma

Date of birth:
Time of birth:
Time of cord clamp:

Affix maternal addressograph

1. Start clock
2. Dry & wrap (or place in plastic wrap if preterm baby <30 weeks)
3. Initial assessment at birth: please circle one in each row:-
4. Call for help
5. Resuscitate baby & document below & on next page

Heart Rate	<60	60 – 100	>100	(Listen with stethoscope)
Breathing	No breathing	Occasional gasp	Crying	
Colour	Pale / White	Blue	Pink	

Time	Document resuscitation needed and time when done		
	Place head in neutral position		
	5 inflation breaths – chest movement	YES	NO
	Reassess heart rate (Listen with stethoscope)	<60	60 – 100
	<u>If no chest movement</u> , consider these: <ul style="list-style-type: none"> - reposition - double jaw thrust - other airway manoeuvre (consider LMA if baby 2 – 5 kg & > 34/40) - give 5 effective inflation breaths 		
	Chest movement	YES	NO
	Reassess heart rate (Listen with stethoscope)	<60	60 – 100
	>100		

	<p><u>If no chest movement</u>, consider these:</p> <ul style="list-style-type: none">- reposition- double jaw thrust- other airway manoeuvre (consider LMA if baby 2 – 5 kg & > 34/40)- give 5 effective inflation breaths
--	---

Time	Document resuscitation needed and time when done continued
	Chest movement YES NO
	Reassess heart rate (Listen with stethoscope) <60 60 – 100 >100
	<u>Once 5 effective inflation breaths given</u> , continue with ventilation breaths for 30 seconds
	If heart rate less than 60 - start chest compressions @ 3:1 - continue 3 cardiac compressions to 1 ventilation breath for 30 seconds
	Attach saturation probe if available: saturation = %, Heart rate = If available, give oxygen to achieve saturation of > 90%
	Reassess heart rate (Listen with stethoscope) <60 60 – 100 >100
	Consider calling NICU & 999 P.T.O
	Continue CPR @ 3:1 if heart rate less than 60
	Reassess heart rate (Listen with stethoscope) <60 60 – 100 >100
	Discontinue CPR once heart rate more than 60 & rising
	Continue ventilation breaths until regular spontaneous breathing
	Reassess heart rate: & breathing: If available, attach saturation probe to allow continuous monitor of pulse & sats
	During transfer, please document: heart rate, sats (if available), any resuscitation required. Document times. Please use additional paper as required.
	Condition on arrival at NICU:

Apgar Score – (recorded retrospectively, useful for prognosis)

Time	Heart Rate	Colour	Breathing	Tone	Reflex	Total
1 minute						
5 minutes						
10 minutes						
15 minutes						
20 minutes						

Please document referral / any discussion with NICU & Ambulance control with times:

Time called 999	
Time called NICU	

Personnel involved with infant resuscitation:

Name: _____ Job Title: _____ Signature: _____
Date: _____ Time: _____

Name: _____ Job Title: _____ Signature: _____
Date: _____ Time: _____

Name: _____ Job Title: _____ Signature: _____

Date: _____ Time: _____

Appendix 12: Maternal Resuscitation

Maternal Cardiac Arrest

Maternal cardiac arrest is very rare and in obstetrics is usually a complication of a previously identified emergency. Procedure when confronted with a collapsed, apparently lifeless pregnant or newly delivered woman.

Flow chart to indicate action required.

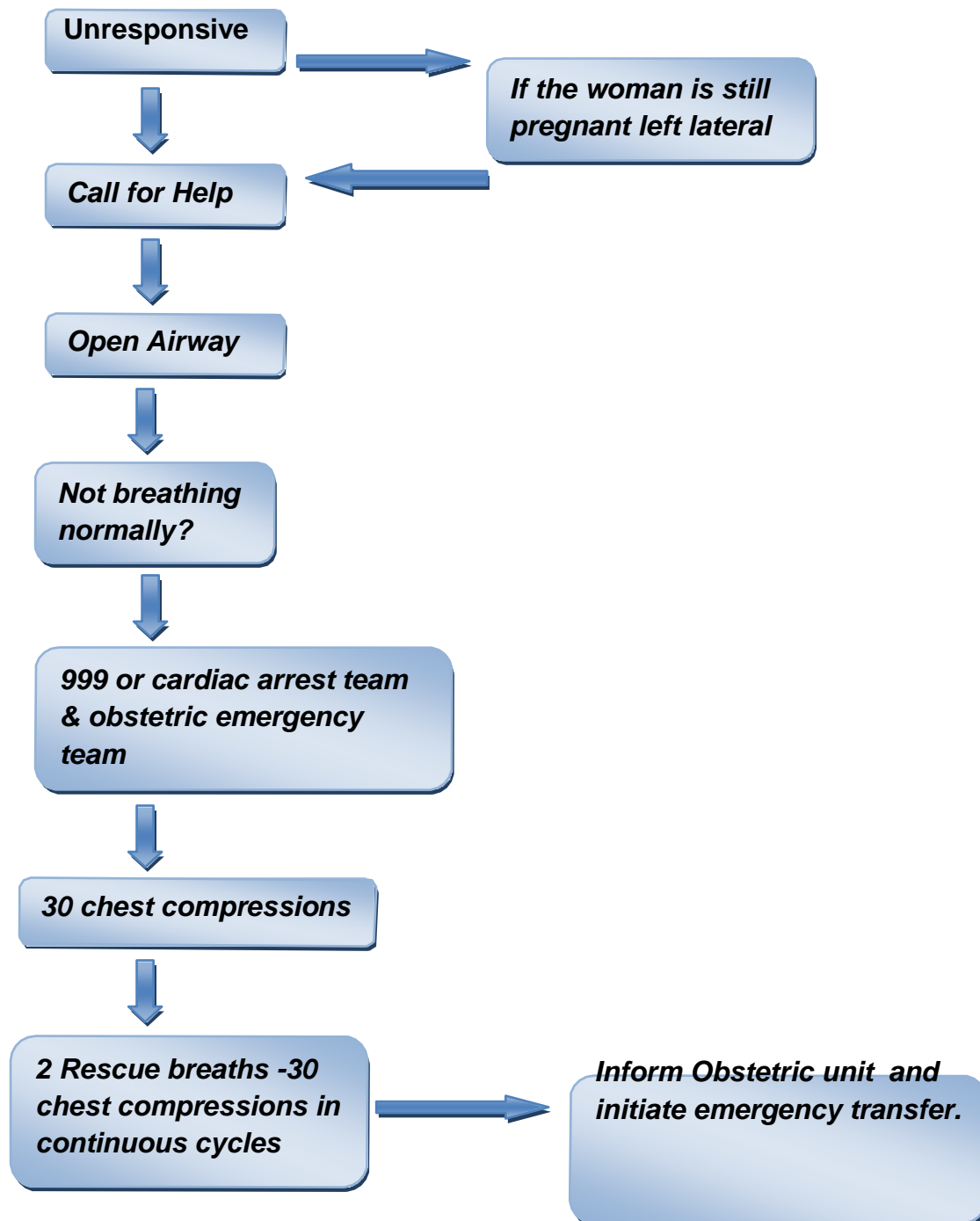
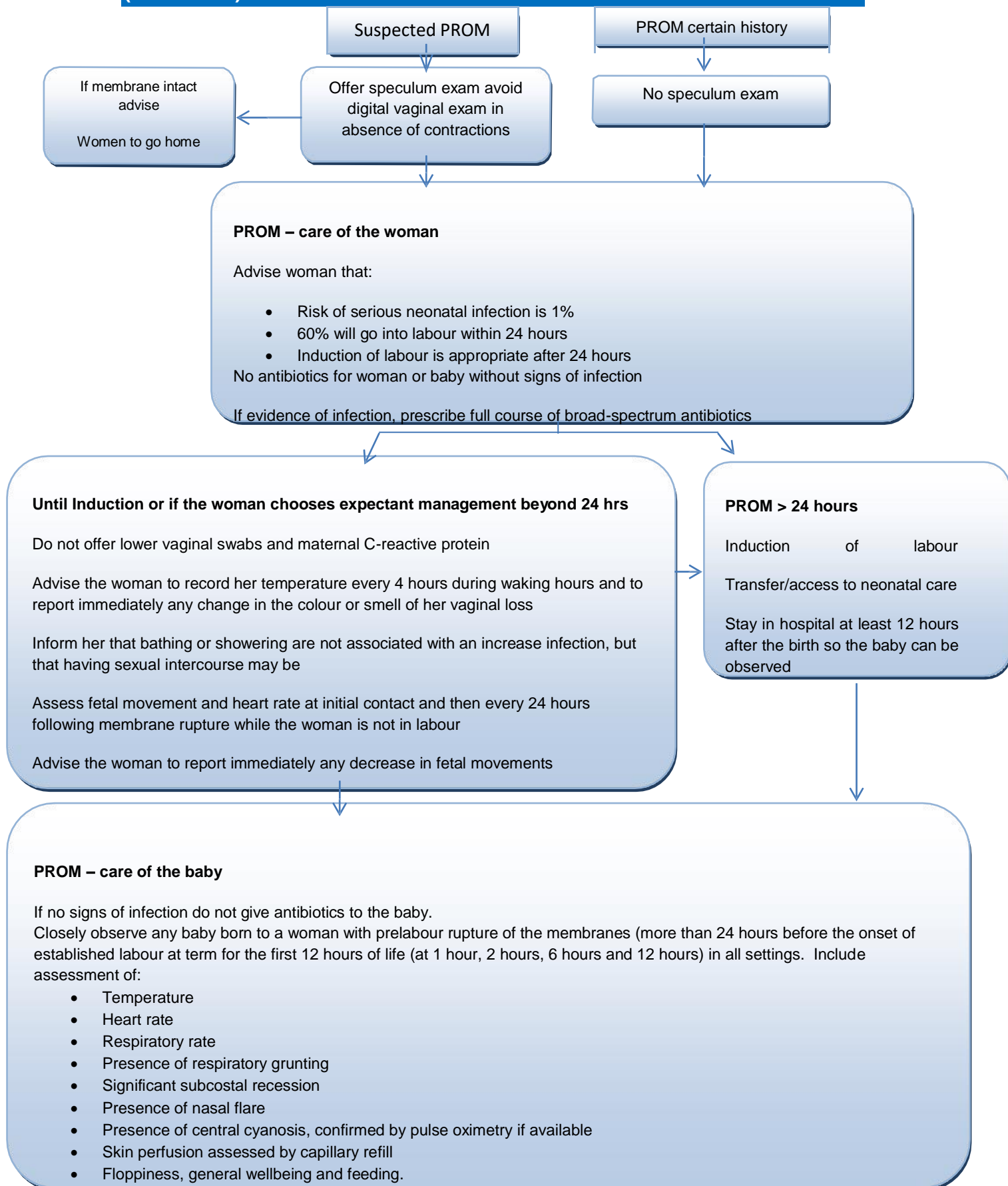


Figure 4: Resuscitation Council 2010 Maternal cardiac arrest action to be taken

Appendix 13: Prelabour Rupture of the Membranes (PROM) at Term (NICE 2014)



Appendix 14: Meconium Stained liquor (NICE 2014)

As part of ongoing assessment, document the presence or absence of significant meconium. This is defined as dark green or black amniotic fluid that is thick or tenacious, or any meconium-stained amniotic fluid containing lumps of meconium. NICE [2014].

Non- significant meconium-stained liquor. – Light green, thin meconium stained liquor

If there has been non-significant meconium, observe the baby at 1 and 2 hours of age in all birth settings.

If significant meconium is present, transfer the woman to obstetric-led care provided that it is safe to do so and the birth is unlikely to occur before transfer is completed. [NICE 2014]

Advise continuous EFM - FSE available in labour and advanced

Neonatal life support available for birth

In the presence of any degree of meconium:

- do not suction the baby's upper airways (nasopharynx and oropharynx) before birth of the shoulders and trunk
- do not suction the baby's upper airways (nasopharynx and oropharynx) if the baby has normal respiration, heart rate and tone
- do not intubate if the baby has normal respiration, heart rate and tone.

Suction upper airways only if thick/tenacious meconium in oropharynx

Baby has depressed vital signs

Suction under direct vision by a health care professional trained in advanced neonatal life support

If any of the following are observed after any degree of meconium, ask a neonatologist to assess the baby:

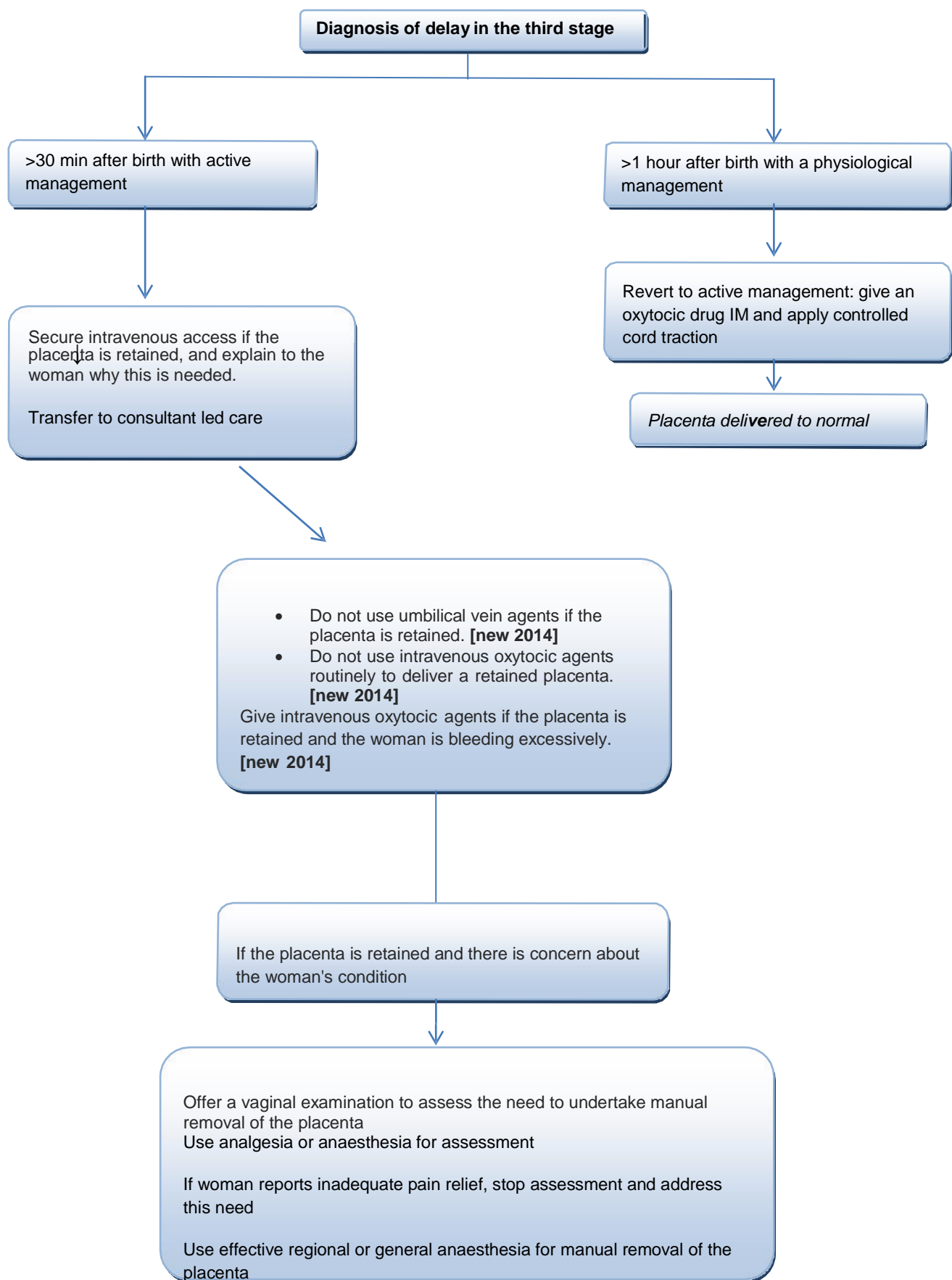
- respiratory rate above 60 per minute
- the presence of grunting
- heart rate below 100 or above 160 beats/minute
- capillary refill time above 3 seconds
- body temperature of 38°C or above, or 37.5°C on 2 occasions 30 minutes apart
- oxygen saturation below 95% (measuring oxygen saturation is optional after non-significant meconium)
- presence of central cyanosis, confirmed by pulse oximetry if available.

Baby born in good condition

1 hour, 2 hours, then 2 hourly until 12 hours old, observe:

- General wellbeing
- Chest movements and nasal flare
- Skin colour (test capillary refill)
- Feeding
- Muscle tone
- Temperature
- Heart rate and respiration

Appendix 15: Retained Placenta (NICE 2014)



Appendix 16: Criteria for Referral to Medical Staff in Postnatal Period (The list is not exhaustive)

<i>Maternal</i>
<p>All women with any symptoms or signs of ill health, including those who are postnatal, should have a full set of basic observations taken (temperature, pulse rate, respiratory rate and blood pressure), and the results documented and acted upon. [MBRACE 2014]</p> <p>Any cause for concern with mother's condition: As indicated by local early warning score MEOWS 1 Red or 2 Amber scores/ CEWS [Community Early Warning score] or unexplained non-specific physical symptoms (distress, agitation, loss of appetite, acute confused state) should be referred for further investigation.</p>
Secondary PPH
Raised BP or signs of pre-eclampsia
Maternal pyrexia
Maternal anaemia, Hb <8.0
Maternal depression or anxiety
<i>Neonatal</i>
Axillary temperature less than 36.4 where skin-to-skin contact is not effective in increasing temperature to 36.4 after 1 hour.)
Reluctant to feed with or without signs of hypoglycaemia
Requiring referral following neonatal examination
Jaundice
Concerns about baby observations

Appendix 17: Neonatal Transfer Criteria

Problem identified	Parameters	Action
Low Apgar scores	Apgar <5 at 5mins transfer out immediately	Transfer to NNU Midwife initiates resuscitation 999 emergency ambulance called and NNU and Obstetric Unit informed of transfer Further midwifery help called Midwife will discuss with SpR on NNU who will advise where baby will be admitted and seen (PN ward or NNU) Midwife will accompany baby and will continue to resuscitate baby if necessary during transfer
Low Apgar scores	Apgar 5–7 at 5 mins discuss with SpR on NNU	SpR on NNU will advise where baby goes:- PN ward or NNU
Grunting / cold babies	Babies unable to maintain temp of 36.5 °C (auxiliary temp) within an hour of birth or showing signs of respiratory distress syndrome.	Midwife will contact SpR NNU to discuss action already taken. May need further action or transfer out
Respiratory distress	Respiratory rate >60 breaths a minute.	Midwife to discuss with SpR condition of baby and any other physical findings, to decide appropriate course of action. If transfer out: Call emergency ambulance via 999 Further midwifery help called Midwife to accompany baby to NNU
Meconium aspiration	Thick meconium stained liquor at delivery with respiratory distress	Midwife will contact SpR in NNU Call emergency ambulance via 999 Further midwifery help called Midwife to accompany baby to NNU
Unexpected foetal abnormality	e.g. extra digits, ear tags, tilapias, cleft lip and palate, hypospadias, hydrocele, skin lesions, dislocated hips, cardiac murmurs	Midwife to contact SpR in NNU will who advise where and when the baby will be seen:- PN ward or NNU or OPD
Signs of infection / pallor Offensive liquor	pyrexia >37°C (Auxillary temp.) on 2 readings in 1 hour. Hypothermia, unable to maintain body temp. or poor feeder	Midwife to contact SpR in NNU who will advise where baby will be seen:- PN ward or NNU
Jaundice within first 24 hrs	Transfer out	Midwife to contact SpR in NNU will advise where baby goes:- PN ward or NNU

Appendix 18 Ambulance Transfer

Calls to WAST are managed in accordance with the WAST Clinical Response Guidelines:

Calls are divided into two categories: **Red Calls** are those which require an immediate response to save life.

Red 1 calls are those where an immediate attendance is required to save life.

Red 2 calls are those where initial treatment and conveyance to a specialist facility is required to save life.

Green Calls are those where there is an urgent problem which is not life threatening.

Green 1 calls are those patients who require a face to face assessment to determine their needs. WAST aim to attend these calls within 30 minutes.

Green 2 and 3 calls are those patients with a minor illness or condition. These calls are provided with further Nurse Advisor telephone assessment prior to the dispatch of an ambulance.

Ambulance Response Capabilities:

WAST currently provides three types of ambulance:

Patient Care Service:

The PCS is the non emergency service offered by WAST. PCS ambulances are equipped with a stretcher, an AED and oxygen. The crew is trained in first aid and manual handling. PCS ambulances do not provide emergency transfers and are not equipped with blue lights. PCS crews are able to undertake routine inter-hospital transfers. An appropriate nursing escort may be required depending on the patients' condition.

Urgent Care Service:

The UCS (formerly known as HDS – High Dependency Service) provides ambulances with a basic life support capability. UCS ambulances are staffed by two Urgent Care Assistants who are trained in ambulance aid including basic patient observation. UCS ambulances are able to provide emergency transfer using blue lights where required. A suitable nursing escort maybe required for some patients. UCA are not trained in managing emergency childbirth.

Emergency Medical Service:

EMA ambulances are staffed by Registered Paramedics and Emergency Medical Technicians. Registered Paramedics are also provided in single crewed Rapid Response Vehicles.

An EMS crew can provide the full range of immediate aid to a seriously ill or injured patient. There is not a Registered Paramedic on every EMS ambulance. Some EMS ambulances are crewed by two EMT staff.

EMS crews are able to provide emergency transfers using blue lights and all EMS staff including EMT staff is trained in emergency childbirth.

Whilst Registered Paramedics are trained in emergency childbirth and common obstetric emergencies it should be noted that their exposure to these cases is thankfully rare. An appropriate midwifery or medical escort will still be required in some cases.

Attendance of EMRTS team:

Where indicated and available the EMRTS will provide an enhancement of pre-hospital critical care to maternal and neonates in both the home and midwife led birth settings where either is deemed to be in a critical/ life threatening condition. The team can support midwives in providing care to stabilize and safely transfer the mother and or neonate. This may be by air or by road and will be decided on a case by case basis. The criteria for EMRTS attendance is available in the process map for attendance of EMRTS Appendix 19.

Escalation:

In the event of a transfer request not being managed within the required timeliness the midwife should in the first instance remake the call and discuss whether there is an alternative grade ambulance available sooner than the original one ordered, for example a lower grade ambulance may be available immediately or if a lower grade ambulance was originally required it may be necessary to upgrade if circumstances change. If ambulance response is still not available in the required timeframe the midwife should escalate concerns to the Head of Midwifery or senior midwifery manager.

Standards the HCP requesting the transfer should re contact ambulance control in the first instance a Duty Control Manager (DCM) - DCM on duty in each of the control room 24 hours per day.

Where there is any concern the situation should be escalated to the DCM, immediately. Local agreement should be established including the appropriate local contact numbers.

EMRTS Cymru: Support for Neonatal and Maternal Emergencies; Version 3; 13th July 2015

EMRTS Available 08:00 hours to 20:00 hours, 7 Days a Week

EMRTS will attend any of:

Neonates:

NLS Commenced
Respiratory distress
Any unwell baby (e.g. sepsis)

Mothers:

ABCDE Compromise (incl. Cardiac Arrest)
Suspected eclampsia
Severe haemorrhage of any kind

Neonatal and/or Maternal Emergency identified by:

- MIDWIFE in attendance (in free standing Midwife Led Unit or Home Birth)
- BYSTANDER (i.e. member of public, where midwife not in attendance)

1

Dial 999. Call will be handled in accordance with standard WAST procedures

i.e. WAST EMERGENCY RESPONSE PROCEEDS AS NORMAL

2

EMRTS available 7 days a week, 8am-8pm

EMRTS Air Support Desk will send EMRTS team if available

- EMRTS may need to speak to 999 caller for more info
- EMRTS will inform midwife or WAST that team is on way
- EMRTS will inform midwife or WAST if team unavailable

Please Inform EMRTS if they are not required:

- Not clinically indicated (EMRTS will require a clinical update in all cases)
- Short distance from consultant led unit (<13mins road transfer and WAST resource on scene ready to go)

Call Air Support Desk on 03001232301

3

EMRTS Top Cover Consultant will provide clinical advice to midwife and/or WAST crew while EMRTS team on way

4

EMRTS arrive and treat patient using a team approach, with full involvement of the midwife and WAST crew on scene. EMRTS consultant will lead resuscitation.

Possible Interventions:

Neonates:

Ventilatory support (eg BVM, CPAP, igel, intubation)
Circulatory Support (eg UV/IO access, iv fluids, inotropes)
Glucose and temperature control (incubator system)

Mothers:

Intubation and ventilation
Blood transfusion
Haemorrhage controlling agents

5

A team decision will be made on the following prior to transfer:

- Appropriate receiving hospital (all neonatal cases will be discussed with CHANTS).
- Travel by air or road (in EMRTS or WAST vehicle). Generally women in active labour will not travel by air. (Birth in flight is very difficult to manage)
- Whether mother and baby travel together or separately.

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