British Association of Perinatal Medicine

Neonatal Support for Freestanding Midwifery Led Units and Home Births

A Framework for Practice

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Contents

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This document is an updated version of 'Neonatal Support for Stand Alone Midwifery Led Units (MLUs): A Framework for Practice (2011)'.

Executive Summary

1. Perinatal outcomes for planned births outside of obstetric units are similar to those within obstetric units, but the potential for unexpected neonatal emergencies still exists.
2. For this reason, all staff attending births in a community setting must be able to provide neonatal support in an emergency situation and be able to access on-going assistance.
3. Full holistic antenatal assessment and ongoing intrapartum assessment of women choosing to birth in a midwifery led setting will minimise the likelihood of neonatal emergencies.
4. Appropriate and safe pathways for neonatal care for all community midwifery settings should be developed and overseen in partnership between LMNSs and neonatal networks.
5. These pathways should be tested regularly through multi-disciplinary simulation and/or skills drills.

Scope

This document refers specifically to the provision of neonatal support for births within settings that are not co-located with obstetric services and where there is no immediate access to neonatal or paediatric staff. This type of service is provided across the UK in Community Midwifery Units, Freestanding Midwifery Units, Birthing Centres and at home. For brevity these will be referred to as MLUs throughout this document. It is intended as a framework to inform development of local, regional and network guidelines for the rare instances where additional support for the baby is required. It does not deal with midwifery-led units that are located within or alongside consultant obstetric units and does not cover in detail midwifery care for mothers.

Links to midwifery standards for MLUs are provided under Additional resources. Recommendations for home birthing teams are specifically addressed in Appendix 1.

Introduction

Freestanding Midwifery Led Units (MLUs) provide midwifery care for women satisfying locally agreed criteria for low-risk births. They tend to serve smaller communities that may be remote and rural where the maintenance of a consultant-led obstetric and/or paediatric service is impractical for both workload and training purposes, although they are also found in urban settings. They are attractive to women in providing a choice for 'non-medicalised' birth, choice being a key principle of the 2016 National Maternity Review (Better Births), now being implemented by Local Maternity and Neonatal Systems (LMNS). There are long and short term health benefits to healthy women with uncomplicated pregnancy birthing in midwifery-led settings. Perinatal outcomes for planned births in MLUs are similar compared to planned births in obstetric units (Birthplace cohort study). There are national standards for all locations in which NHS staff attend births (Joint Royal Colleges Working Party, Safer Childbirth, BAPM Service Standards for Hospitals providing Neonatal Care, Intrapartum care for healthy women and babies – NICE CG190). However, it is important that MLUs and community staff have a clear locally agreed strategy to manage risk and deal with emergencies: this should be overseen and implemented by the LMNS and neonatal network.

Whilst operational protocols should minimise the chance of sick babies being born in an MLU or at home births the potential exists for babies to become unexpectedly unwell, or for unexpected preterm birth, and these rare occurrences need to be anticipated with clear guidelines to manage the situation (ESMiE confidential enquiry). It is essential that careful consideration is given to recognising the need for and providing appropriate support for any baby requiring anything above routine care both at birth and in the immediate postnatal period, and staff training should include these aspects of neonatal care (ATAIN, MIST).

The following areas should be considered:

- Governance.
- Risk assessment.
- Information for women.
- Pathways for women choosing to birth in Midwifery-Led settings outside of guidance
- Staff skill mix.
- Setting, environment and equipment.
- Neonatal training for staff.
- Neonatal resuscitation.
- Emergency procedures.
- Communication.
- Neonatal transfer.

Governance

For every MLU a clearly defined body should be established by the LMNS and neonatal network that oversees and ensures appropriate and safe pathways for neonatal care within the framework of a designated neonatal service. This body will be responsible for:

- Nominating a clinician as the primary neonatal lead.
- Neonatal training for staff including resuscitation & stabilisation of the newborn.
- Developing pathways for emergency neonatal care working with local ambulance services to ensure prompt ambulance attendance and transfer in emergencies.
- Mandating reviews of adverse outcomes including babies requiring resuscitation or transfer to a neonatal unit. Thematic analysis of adverse outcomes should be undertaken regularly. These steps will enable rapid learning across the LMNS and beyond (Implementing Better Births, 2017, Ockenden Final Report 2022).
- Risk assessment of the care environment.
- Audit and data collection (NICE CG190).
- Ensuring alignment with existing midwifery governance.
- Providing clear guidance for the management of neonatal emergencies in a community setting (ESMiE confidential enquiry).
- Ensuring guidelines common to the local/regional/network neonatal service are readily available to MLU and community staff. These should be in electronic format.

Guidelines supplement the discussion with the neonatal team by ensuring consistency, and are not a replacement for telephone advice which must be sought in all cases where there are concerns.

Risk assessment

Due to the accepted model of care in midwifery-led settings women/babies with additional care needs should be advised to birth in obstetric units where there is direct access to obstetric and neonatal services should they be required. Predicting pregnancy outcome is extremely difficult (Campbell 1999). Although there is no universally established and accepted definition of "low-risk", guidance is available (NICE CG190). In order to be able to offer birth in an MLU or home setting the following must be made available as part of the on-going risk assessment:

- A consideration of the risks to the wellbeing of both mother and baby.
- Clear definitions of, and pathways to, escalate decision making for any issues that might predictably cause the newborn baby to require more than routine standard care since this indicates the need to deliver in a facility that can provide a higher level of care.
- A clear mechanism for deciding, recording and actioning when a woman moves from being considered "low-risk" to a higher risk category:
    - during antenatal care.
    - during the latent phase of labour.
    - at the onset of active labour.
    - during labour.

Women who choose to do so and are at low risk of complications at the onset of and during labour, would be expected to proceed to deliver in any midwifery-led setting (EsMiE confidential enquiry). The framework provides advice for perinatal teams supporting other women choosing a midwifery-led setting within the section "'Pathways for women choosing to birth in midwifery led settings outside of guidance ".

Local MLU and home birth eligibility criteria should be developed following consultation with and between a number of professional groups and staff which (depending on geographical factors and local setup) might include:

- Midwives
- Obstetricians
- Paediatricians/Neonatologists
- Neonatal nurses
- Anaesthetists
- GPs
- Neonatal/perinatal network
- Safeguarding adult and children's services
- Neonatal transport service
- Ambulance service
- User group representation (*e.g.* Maternity Voices Partnership)
- Trust senior management
- Trust clinical governance and risk management teams
- Local Maternity Neonatal Systems

Information for women

All women should be given the opportunity to discuss all places of birth including the benefits and contraindications/risks. Information should be provided to the woman and her family, in respect of language and format, who book to birth in MLUs or at home and must provide a balanced view of the options available to support the woman to make an informed choice and should include:

- The case selection criteria for MLU and home birth deliveries.
- The need for repeat risk assessments during pregnancy, at the onset of labour and during labour.
- An explanation that transfer to an obstetric unit intra-partum is expected for a significant minority of women.
- The availability and level of maternal and newborn care for women and babies who become unexpectedly unwell in the MLU or at home: this should cover the rare but unpredictable need for neonatal resuscitation, stabilisation and transfer.
- The transfer distances and total time taken for each potential birth setting (from recognition of the need for transfer to arrival in the consultant unit) involved along with the locally agreed mechanisms for transfer, should also be explicitly discussed and documented both at booking and at the onset of labour. This information is particularly important for women who are booked to deliver in remote/rural locations.

Pathways for Women choosing to birth in Midwifery-Led settings outside of guidance

In these circumstances medical and midwifery staff are obliged to follow the guidance issued by the GMC (Personal Beliefs and Medical Practice, Decision Making and Consent) and NMC respectively:

> "You must respect a competent patient's decision to refuse an investigation or treatment, even if you think their decision is wrong or irrational. You may advise the patient of your clinical opinion, but you must not put pressure on them to accept your advice. You must be careful that your words and actions do not imply judgement of the patient or their beliefs and values."

If the perceived risk is to the unborn baby some basic principles should be considered [NICE CG190]:

- The named midwife would be expected to support the woman with additional support from senior staff where required.
- The perceived or actual risk should be clearly described to the woman verbally and in writing, including the reasons why MLU or home birth is considered inappropriate.
- The potential resources required to care for the newborn baby should be described verbally and in writing and compared to the level of care available in the MLU or home birth setting. This will ensure that the gap in care provision is described clearly.
- Any discussion and decision reached should be documented.
- If appropriate a second opinion should be offered.
- The issue should be revisited as appropriate at each subsequent contact with the woman throughout her pregnancy.
- If the woman insists on MLU or home birth despite there being neonatal contraindications, a clear plan of care for her baby must be completed and made available to the woman, the midwifery and neonatal teams, including any need to transfer the baby to a consultant unit for on-going care.

If a woman with known contraindications presents in labour, ways of managing anticipated problems faced by the newborn baby should be considered, including:

- The provision of basic ongoing support for the baby.
- How to obtain appropriate, timely advice.
- How to transfer the baby to an appropriate neonatal unit or transitional care setting as needed.

Once the baby is born, staff will have Safeguarding responsibilities and must act in the best interest of the baby even without parental consent (Fertleman M 2003).

Staff skill mix

The numbers and skill mix of staff in a MLU will vary depending on the number of deliveries undertaken, the exact model of care provided and the geographical location.

Staff should be able to:

- Provide normal maternity and newborn care to both mother and baby.
- Identify acute deterioration in the condition of either the mother or baby.
- Initiate and provide appropriate newborn resuscitation in line with Resuscitation Council UK Newborn Life Support guidance, and stabilisation as agreed locally, including in the rare event of both mother and baby becoming unwell simultaneously.
- Access additional support as required, including initiation of either maternal or neonatal transfer without compromising care of either patient.

Setting, environment and equipment: Resuscitation and Stabilisation

- Advice on the equipment required for unexpected newborn resuscitation and stabilisation including piped gases, electrical sockets, and suction, should be sought from the nearby Consultant unit Newborn Resuscitation Lead. Separate gas sources should be available for both mother and baby in the event that both require simultaneous resuscitation. Gas sources for the infant must be pressure limited.
- The equipment should be stored in a dust-free area that is easily accessible in an emergency and should be separate from equipment required for the mother. A portable resuscitaire in an MLU is ideal and could be kept outside the room when not in use thus maintaining the appropriate environment for low risk deliveries.
- The equipment for resuscitation and stabilisation should be checked daily and rechecked following use.
- The Consultant unit newborn resuscitation team are encouraged to visit each MLU facility that refer newborns to them, to assist in the development and ongoing audit of newborn resuscitation and stabilisation facilities and guidelines.
- Suggested equipment for an MLU facility neonatal resuscitation is listed in the Appendix 2
- An equipment list for newborn resuscitation and stabilisation for home deliveries is provided by the Resuscitation Council UK.

Neonatal training for staff

Newborn care provided in MLUs and at home will largely focus on care of the well baby but depending on the exact model of care provided and the geographical location, it may be necessary for staff to provide more than this for a limited period of time.

Areas of recommended training include:

- Examination of the newborn (NIPE 2019). Midwives practising in MLUs and at home births should attend an accredited course for newborn examination. The neonatal team can support this process by providing the practical training required on the Consultant unit during the initial phase and the updates as required by the course unless there is an established training midwife for this purpose; advanced neonatal nurse practitioners are ideally suited to provide this.
- Common neonatal problems.
- Recognition of early signs of neonatal illness (MIST 2019, ATAIN 2017).
- Identification of the unexpectedly vulnerable baby (*e.g.* previously unrecognised IUGR) (ATAIN 2017).
- Acute/immediate resuscitation of the newborn (RCUK 2021).
- Post resuscitation care and stabilisation of the sick newborn prior to transfer (MIST 2019).
- Logistics of emergency procedures including the use of emergency equipment (RCUK 2021, MIST 2019).
- Transfer of the sick newborn including knowledge of the transfer environment (MIST 2019).
- Safeguarding. (Safeguarding in maternity – RCM iLearn, updated 2019).
- Telemedicine training (the COVID-19 pandemic resulted in an upsurge in the use of telemedicine; video links have been employed to support community resuscitation (Donohue LT et al, 2019).

Staff groups that should undergo training/continued professional development will also depend on the precise model of care offered but might include:

- Midwives
- Healthcare assistants/Maternity support workers
- Obstetricians
- Paediatricians/Neonatologists
- Neonatal nurses
- Anaesthetists
- GPs
- Ambulance personnel

In addition to e-learning, practical face-to-face multidisciplinary training is essential and will enable simulation of real-time emergencies for staff within their normal roles, ideally *in situ*.

Where multi-professional training cannot be accommodated within the MLU itself additional simulation within the MLU setting for maternity staff is essential to ensure swift identification and employment of essential equipment and communication systems.

Neonatal resuscitation

- The Resuscitation Council UK states that personnel competent in newborn life support should be available for every birth and if intervention is required, there should be personnel available whose sole responsibility is to care for the infant (RC UK 2021).
- Training/education must cover the recommendations set within RC UK guidance:
  - Newborn resuscitation providers must have relevant current knowledge, technical and non-technical skills.
  - Structured educational programmes, teaching the knowledge and skills required for newborn resuscitation are required.
  - The content and organisation of such training programmes may vary according to the needs of the providers and the organisation of the institutions.
  - Programmes should include:
    - newborn life support training carried out by appropriately qualified and trained faculty (NHS Maternity Resolution 2021)
    - regular practice and drills
    - simulation including team and leadership training
    - feedback
    - objective, performance focused debriefings and reflection.

- Annual updates in neonatal resuscitation for midwives is also recommended within Maternity Incentive Scheme, NHSR.
- Training programme[s] should incorporate induction of new staff as well as regular updates for existing staff.
- Certification as a provider of Newborn Life Support (NLS) Resuscitation Council UK is strongly advised for midwifery staff in community settings.
- Rotation to the consultant unit maternity suite and neonatal unit may also be considered.

Emergency procedures

- These situations are rare and unexpected.
- Robust clear procedures must be in place that can be easily followed in the event of an emergency.
- Simple, effective means of communicating the level of urgency should be considered, for example colour coding, and agreed with the ambulance and receiving obstetric and neonatal unit teams.
- A guideline detailing communication procedures with a single point of contact, and subsequent cascading of information by this contact to the neonatal team, transfer team/paramedic and other staff who may be able to assist within the MLU site, is essential.
- Clear pathways of care should be established for stabilisation and transfer of sick and stable newborns in and from each MLU and home birth, with guidelines to support the process easily available in written form in addition to electronic access. These pathways will vary depending on the geography and neonatal service provision.

The fastest way for a mother or baby to travel to the nearest appropriate hospital is almost always by 999 ambulance accompanied by the midwife who leads on and delivers any required newborn resuscitation and stabilisation procedures, whilst supported by the ambulance personnel.

Some units, due to their location and local geography (for example islands or remote rural locations, particularly in Scotland) will not be able to achieve a timely transfer to a local CLU by 999 ambulance. In these circumstances, specialist neonatal retrieval may be more appropriate. This will necessitate locally agreed contact, stabilisation, support pathways and resources. Families considering birth in these units need to be made fully aware that immediate specialist neonatal support is not available and understand the timescales and risks inherent in arranging an emergency transfer, including the option for a 999 ambulance transfer if this is deemed the most appropriate mode (SCOTSTAR operational guidance 2021; Fatal Accident Report B327/15. Fatal Accidents and Sudden Deaths Inquires (Scotland) 2018; Accessing Neonatal Advice and Pathways for Transfer of Newborn Infants delivered in CMUs to NNUs , NHS Scotland April 2021.

Communication

- Any abnormalities detected or concerns identified should be discussed with the neonatal team. Local arrangements for liaising with the appropriate clinician(s) including contact details should be established and readily accessible on the MLU and at a home birth and should provide immediate access to appropriate clinical advice.
- The neonatal team need to ensure that consistent clear advice is given in keeping with local and neonatal network guidelines. This process should be explained at induction for new staff.
- Any advice given must be clearly documented by all parties involved and must form part of the baby's clinical notes.
- MLU and community staff require access to a telephone in the birthing room so that they can call a pre-established single point of contact in an emergency. Similar direct contact is also required for neonatal concerns, *e.g.* the neonatal unit. This allows MLU and community staff to provide immediate support to the mother and baby. The telephone number for the contact(s) should be displayed in all birthing rooms.
- In order to maximise necessary information in the shortest possible time a pre-established checklist for caller and receiver should be available by the telephone. Checklists might utilise the SBAR approach to safer communication (Situation, Background, Assessment, Recommendation) (NPSA).
- MLU and community staff should have direct access to a senior member of the neonatal team if they require emergency telephone advice.
- The direct line numbers for all MLUs should be available on the neonatal unit, Consultant unit suite and appropriate switchboards.
- A standardised communication of urgency in relation to transfer, with ambulance services and the receiving hospital should be established (ESMiE confidential enquiry).
- These communication procedures should be tested as a live skills drill.

Neonatal transfer

- Neonatal transfer for life-threatening clinical conditions from a MLU or home birth are rare. There are a number of other urgent neonatal transfers which are less uncommon.
- Arrangements regarding transfer will vary depending on the model used and local geography.
- The equipment required for transfer of sick newborns should be determined, documented and made accessible for each MLU and home birth. The teams used and the equipment required to provide transfer are dependent upon local geography and will vary between areas.
- The equipment utilised by midwifery staff for neonatal transfer should be checked on a daily basis and re-checked following use. All checks must be clearly documented.
- The Consultant unit newborn resuscitation team should be encouraged to visit each MLU facility that refer newborns to them, to assist in the development and ongoing audit of transfer facilities and guidelines.
- Suggested minimum equipment for neonatal transfer is listed in Appendix 2.

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Additional resources

- ATAIN: www.e-lfh.org.uk/programmes/avoiding-term-admissions-into-neonatal-units
- The best start: five-year plan for maternity and neonatal care. 2017. www.gov.scot/publications/best-start-five-year-forward-plan-maternity-neonatal-care-scotland/
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- Scottish Routine Examination of the Newborn Course. Scottish Multiprofessional Maternity

Development Programme, NHS Education Scotland.
- www.scottishmaternity.org/scottish-routine-examination-of-the-newborn.
- The S.T.A.B.L.E Programme.
- www.stableprogram.org/
- Staffing in maternity units: Getting the right people in the right place at the right time.
- www.kingsfund.org.uk/publications/staffing-maternity-units

Appendix 1: Home births

Significant intervention for the baby is rarely required in a planned home birth, but presents significant challenges, particularly in terms of:

- Having a flat, safe working area where the baby can be resuscitated and/or stabilised
- Ensuring adequate thermal support
- Dealing with any concurrent maternal problems
- Access for ambulance stretchers

An equipment list for newborn resuscitation and stabilisation for home deliveries is provided by the Resuscitation Council UK. www.resus.org.uk/library/quality-standards-cpr/equipment-used-homebirth

The Resuscitation Council UK 2021 made recommendations for planned home deliveries:

- Ideally, two trained professionals should be present at all home deliveries. At least one must have received quality assured training in providing mask ventilation and chest compressions to the newborn infant.
- Recommendations as to who should attend a planned home birth vary but the decision to undergo such a birth should not compromise the standard of initial assessment, stabilisation or resuscitation at birth.
- Whilst rarely required, there are limitations to the provision of advanced resuscitation at home and this should be made clear to the mother.
- A minimum set of equipment of an appropriate size for the newborn infant should be available; see link above.
- Caregivers undertaking home deliveries should have pre-defined plans for difficult situations.
- Unexpected deliveries outside hospital are likely to involve emergency services that should be prepared and trained for such events and carry appropriate equipment.

Should an unexpected emergency arise, good communication is essential, as follows:

- A 999 ambulance should attend immediately; the paramedic can provide assistance and transfer to a Consultant unit can be expedited
- The parents should be kept informed of their baby's condition
- Neonatal advice should be sought urgently (see Emergency Procedures)
- During stabilisation the baby will require on-going, regular assessment which must be clearly documented

Following stabilisation the ambulance stretcher should be prepared with warm dry towels and an activated thermal mattress if available. All equipment should be secured prior to moving the baby. Transfer to the ambulance should be undertaken as soon as it is safe to do so. In addition:

- Plan the route to the vehicle with consideration to potential obstructions.
- Use the second ambulance staff to facilitate the transfer.
- Ensure the ambulance is warm.
- Update the parents.
- Reassess the baby regularly during the transfer, paying particular attention to maintaining an appropriate airway position.
- Document observations regularly as well as any changes in the baby's condition.

Appendix 2: Freestanding MLU facility
Equipment for resuscitation, stabilisation and neonatal transfer

The following equipment is suggested in line with RC(UK) and should be latex free.

Thermal control and assessment:

- Newborn Life Support algorithm.
- Warm dry towels, food-grade plastic bags & hats of various sizes.
- Overhead heater.
- Good light source.
- Stethoscope.
- Clock/stop watch.
- A flat dedicated surface.
- Thermometer.

Airway and Breathing:

- Pressure-limited gas supply such as Tom Thumb device or resuscitaire.
- Circuit with T-piece and adjustable PEEP valve.
- Self-inflating bag 500ml with 40cmH_2O blow off valve.
- Separate air & oxygen gas supply with tubing to connect to pressure-limited device.
- Appropriate masks for term and preterm newborns, 2 of each.
- iGel size 1 or alternative laryngeal mask airway; or alternative oropharyngeal airway.
- 2 paediatric Yankauer suckers.
- 2 laryngoscopes with one long & one short blade, and spare batteries.
- Soft suction catheters wide-bore (12 or 14FG).
- Nasogastric tubes – 6, 8, 10 & 12 FG & oral syringes to connect.
- Tape, scissors & small forceps.

Additional items:

- Oxygen saturation monitor/probes as locally agreed.
- Use of video link where this is available.

Additional equipment for Neonatal Transfer

- Transport pod or incubator for thermal control & security or use ambulance strapping (*e.g.* ACR) system, as locally agreed.
- Warming mattress – activated.
- Portable light e.g. torch.
- Clock/stopwatch.
- Mobile telephone.

NB: Equipment for resuscitation, stabilisation, and transfer in an *alongside* MLU within the consultant unit should be in line with the Resuscitation Council UK to support the skills of neonatal and paediatric colleagues who are called to support midwifery colleagues.

BAPM

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This document was produced by the British Association of Perinatal Medicine (BAPM).

BAPM a membership organisation that is here to support all those involved in perinatal care to optimise their skills and knowledge, deliver and share high-quality safe and innovative practice, undertake research, and speak out for babies and their families.

We are a professional association of neonatologists, paediatricians, obstetricians, nurses, midwives, trainees, network managers and other health professionals dedicated to shaping the delivery and improving the standard of perinatal care in the UK.

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