British Association of Perinatal Medicine

Calculating Unit Cot numbers and Nurse Staffing Establishment and Determining Cot Capacity

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Supplementary guidance to BAPM Framework for Practice - Service Standards for Hospitals Providing Neonatal Care (3rd edition) (2010)

Endorsed by:

NHS England

Foreword

Staffing standards are important not only to the delivery of safe services and good outcomes but also for the wellbeing of the staff providing care. One of the challenges of delivering both maternity and neonatal services is dealing with the peaks and troughs of demand. We in the NHS have seen staff rise to the challenge of a busy day, and the selfless commitment of our colleagues make us proud. Sadly there are examples of chronic understaffing which erodes the morale of clinical teams and has an adverse impact on the quality of care and staff retention. This guidance from BAPM describes a pragmatic approach to staffing of neonatal services which recognises that perfection must not be the enemy of the good. In addition to following this guidance it is important that provider trusts work together as a network to cross cover and support services dealing with peaks in demand.

We are delighted that as we go forward there is a strong mandate in the 10 Year Plan to make the safest Neonatal Services a priority, and encourage the close working of Maternity and Neonatal Services to the ultimate benefit of mother, baby and families.

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Development of this document

This document has been written by BAPM Executive Committee in consultation with the BAPM membership, neonatal networks and other professional organisations.

Calculating Unit Cot numbers and Nurse Staffing Establishment and Determining Cot Capacity

One of the biggest current challenges in the optimal delivery of neonatal care is the shortage of neonatal nurses and the shortage of places for QIS training. This has been acknowledged in a recent National Review [1]. Despite this, neonatal professionals continue to work hard to provide high quality care. It is imperative that we continue to strive for improvements in nurse recruitment, retention and training and work towards achieving the nurse to baby ratios advocated in the BAPM Service Standards 2010 [2].

This document was developed through consensus and is supported by evidence that a higher nurse:baby ratio, especially of neonatal nurses with a QIS qualification, is associated with a better outcome for babies [3,4]. The document aims to help professionals determine optimal cot numbers and neonatal nurse staffing for individual units within a network and to facilitate decisions about admission when a unit is close to capacity. It should be used in conjunction with Safe, Sustainable and Productive Staffing [5], the recommendations of the Neonatal Review in England [1], and the recommendations of the Maternity and Neonatal Services Review in Scotland [6], as well as existing standards in each of the UK nations (7).

Planning cot numbers and nursing establishment

Professional guidance regarding optimal nurse staffing as described in the BAPM Service Standards for Hospitals providing Neonatal Care 2010 [2] should continue to be the basis for calculation of the nursing staff establishment of a neonatal unit, despite the fact that many units regularly struggle to attain these staffing levels. The guidance states that the minimum nurse to baby ratio should be 1:1 for babies receiving intensive care (QIS nurses only), 1:2 for high dependency care (QIS nurses either directly delivering care or supervising registered nurses) and 1:4 for special care.

A unit's cot numbers should be agreed at network level as that appropriate for the needs of its own maternity catchment and (where relevant) for its function as a referral unit, and should not be informed solely on the basis of staff availability. Following agreement of the number of cots *required*, the nurse staffing establishment should be calculated using BAPM standards, calculated on the basis of an average 80% cot occupancy [8] and with the help of the appropriate staffing tool (e.g. the Dinning tool in England and the Neonatal Workload tool in Scotland) [9,10]. Levels of staffing should be monitored and used together with information on transfers outside the network pathway as the basis of negotiation with the relevant commissioning body.

Nurse staffing guidance and the evolution of networks

Current BAPM guidance on optimal nurse staffing [2] was published early in the evolution of the networks in England and warrants some clarification with the maturation in network functioning. Clinical networks were set up with the realisation that the mothers and babies with the most complex care needs often require care in more than one unit and these networks have become the model of organisation of neonatal services throughout the UK. The ambition was that the formation of regional networks of units with shared governance would ensure the best clinical outcomes with the least disruption for families. There is now evidence that the development of clinical networks has been accompanied by better adherence to optimal care pathways for the highest risk babies [11].

In an ideal situation, all mothers and babies (except those with a requirement for supra-specialist care) should be able to be cared for within their own network and transfers of mothers and babies only undertaken when this is considered part of their ideal pathway of care.

Neonatal care, in common with other forms of unscheduled care, varies enormously in workload hour by hour. It was always intended that nurse to baby staffing ratios for individual units should be calculated on an averaged basis. Unless units are continuously staffed for the highest possible peaks of activity, or new admissions avoided by transferring mothers and babies as soon as optimal nurse staffing levels are threatened, optimal nurse to baby ratios cannot be achieved all of the time.

Decisions about cot capacity and patient transfer

BAPM recommends that, when a neonatal unit is alerted to the potential for an admission either from the local maternity service or from an *in utero* or neonatal transfer, the decision to accept or reject is based on consideration of both the needs of existing babies in the neonatal unit and those of the mother or baby requiring care. Thus such a decision needs to be preceded by consideration of all the following factors (a) the number of babies in the unit receiving different levels of care, their relative acuity, and any anticipated changes (b) the staffing and skill-mix in the unit in comparison with BAPM guidance (c) the possibility of more staff-efficient reorganisation of babies within the neonatal unit (d) the potential for repatriation of babies (e) alternative options for the mother or baby requiring care and any risks associated with such options. Potential risks to mother and/or baby (including long travel distance from home) that may result from transfer must be weighed against potential risks of being cared for in a neonatal unit that is near to full capacity, and efforts made to keep families as close to home as possible.

Nurse:baby ratios measured at a single point in time should not be used on their own to inform closure of a unit to further admissions.

Neonatal units should make sure that their senior team is aware of mechanisms for accessing clinical advice from a specialist centre when needed (to ensure that there are

early discussions about the best care pathway prior to the need for transfer) and for escalating to the network when a within-network-pathway transfer request for either a mother or baby into a maternity-neonatal centre has to be declined.

Networks should ensure that cot numbers in their units are able to satisfy optimal patient flows for the majority of the time. They should have a mechanism for monitoring and ensuring the optimal management of cot capacity as well as maternal or neonatal transfer (including transfer for repatriation).

Commissioners and service reviewers should expect units and networks to have the above mechanisms in place and for units and networks to be able to provide evidence of their functioning and any quality improvement related to these mechanisms.

Parents should expect to be told the rationale for any transfer and to receive basic information about the receiving unit from staff caring for their baby in the referring unit soon after the decision to transfer.

Organisations representing neonatal professionals should work together to help to enhance neonatal nurse recruitment, training and retention.

References

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