

Designation of Neonatal Units

Introduction

- 1 The Staffordshire, Shropshire and Black Country Neonatal Network has been considering the level of neonatal care that should be provided in each of the hospitals within the network. This report summarises the work that has been undertaken to date, recommends a level of care that each hospital should provide and identifies issues that need to be taken forward as a result of this work.

Background

Report of the Neonatal Intensive Care Services Review Group

- 2 In April 2003 the Department of Health published the *Report of the Neonatal Intensive Care Services Review Group*. This report concluded that change to neonatal care services were required because the current pattern of service was resulting in inappropriate transfers of babies, some mothers and babies being cared for a long way from home, insufficient staffing and capacity in some units, difficulties with transport and a lack of national data on outcomes of intensive care.
- 3 The Report recommended the establishment of managed clinical networks— where hospitals provided differing types of care work together to ensure that mothers and babies receive their care as near to home as possible. These networks would offer families the greatest opportunities for local birth, minimise transfers to intensive care and, for babies transferred for longer term intensive care, facilitate early return to a local hospital. This would be achieved by concentration of skills and expertise required for the care of babies receiving longer and more complex care.
- 4 Neonatal networks were expected to agree the way in which the needs of individual babies should be identified (categories of care) and the level of care provided by each neonatal unit (designation of units). The Report proposed four categories of care: normal, special, high dependency and intensive care.
- 5 Four types of unit providing care for newborn babies are described in the Report. All units will need to be able to resuscitate and stabilise a baby who is unexpectedly born prematurely or very sick. In addition, units would provide the following care:

Midwifery Unit Normal care

Level 1 Unit Normal care
Special care

Level 2 Unit Normal care
Special care
High dependency care
Short-term intensive care (duration defined by the network)

Level 3 Unit Normal care
 Special care
 High dependency care
 Short and longer-term intensive care

Each neonatal network was expected to have at least one level 3 unit and more if required, once of which should act as the network lead centre.

- 6 The Review Group Report goes on to describe the standards of care expected in each type of unit. Most of these recommendations are based on the British Association of Perinatal Medicine (BAPM) Standards for Hospitals providing Neonatal Intensive and High Dependency Care (2001).
- 7 The Review Group Report summarises the benefits expected to result from implementation of its proposals:
- The number of inappropriate transfers of mothers and babies would be reduced.
 - In general, mothers and babies would be cared for closer to home.
 - Improved staffing levels, standards of care, capacity and cooperation between units would result in better outcomes for babies.

As a result, between 200 and 300 lives would be saved and inequalities in infant mortality rates between manual groups and the rest of the population would be reduced by at least 10%.

European Working Time Directive and Consequent Staffing Issues

- 8 From August 2004, the European Working Time Directive (EWTD) was extended to apply to doctors in training, with a phased maximum hours of 58 hours work per week. From 2009, the maximum hours will be reduced to 48 hours per week. Eight doctors at each tier will be needed to run a full rota. This will, in turn, have implications for the delivery of training. Training will need to be structured and organised differently to ensure that doctors in training gain the necessary experience and competence. These changes affect all health services and impact particularly on maternity and neonatal services because:
- Consultant-led maternity services will need to maintain three tiers of medical staffing in obstetrics and full-time anaesthetic cover.
 - Level 1 neonatal units will normally function alongside general paediatric services – which will require three tiers of paediatric medical staffing.
 - Level 2 neonatal units should have an SHO / ANNP rota for the neonatal unit, additional to the general paediatric service.
 - Level 3 neonatal units should have three tiers of medical staffing dedicated to the neonatal service¹.
 - Changes to training arrangements consequent on EWTD implementation are resulting in a) GP vocational training scheme posts being withdrawn from the paediatric rota, b) F2 trainees (second year post-qualification) who are relatively inexperienced in neonatology being part of the paediatric rota and c) increasing difficulty in appointing to middle grade posts in paediatrics as the number of Specialist Registrar posts available has increased substantially and, currently, there are insufficient suitable candidates to fill these posts.

The impact of these changes is that there will not be sufficient doctors available to continue to run 24 hours services on as many sites as currently exist. Even if

¹ British Association of Perinatal Medicine. 'Standards for Hospitals providing Neonatal Intensive and High Dependency Care'. December 2001.

possible to appoint sufficient medical staff the workload will be insufficient for them to maintain skills and meet their continuing training requirements, therefore there is a need to concentrate the intensive care work into a smaller number of units.

Black Country Review

- 9 A review of the configuration of health services in the Black Country has been taking place in parallel with the neonatal network's work on designation of neonatal units. A workshop was held in July 2005 which looked at the sustainability of existing models of care across a range of specialties, especially maternity, neonates and paediatrics. There were concerns about the sustainability of these services in all three Trusts within the Black Country. Public consultation on the organisation of health services in the Black Country is expected to start in the autumn of 2005. The outcome of this consultation may affect the configuration of neonatal units. This issue is discussed further in section 15 (below).

Designation Process

- 10 The Staffordshire, Shropshire and Black Country Neonatal Network has been working throughout 2005 on the designation of neonatal units. In February 2005 a workshop was held for members of the network, including parent representatives. This workshop discussed:
- the reasons why change is needed,
 - the current number of neonatal cots and their staffing,
 - the types of unit needed in the future and their staffing
 - the proposed criteria for deciding on the designation of units and
 - the process to be used for the designation of units.

The report of the workshop, the options that should be evaluated and a description of the different types of unit were agreed by the Network Board in April 2005².

- 11 Additional information on maternity and neonatal services and their staffing was then collected from neonatal units. A small Working Group comprising the Network Team plus external advisers met to evaluate the options against the agreed criteria.
- 12 The results of the option appraisal were presented to a workshop for members of the network, including parent representatives on 29th June 2005. The report of the workshop was agreed at the Network Board in August 2005³ and further work identified on:
- confirming the accuracy of information used to evaluate the options, including further visits to all units
 - evaluating additional options, especially around the configuration of level 3 units
 - consideration of the impact of deprivation on the designation of units

² *Unit Designation Event - Workshop Report*
- *Capacity Planning and Designation Briefing Paper*

³ *Unit Designation – Briefing paper on progress*
- *Report on designation workshop (29 – June – 2005)*

- further consideration of travel times in rural areas – especially those for Shropshire and mid Wales

The detailed results of this work are given in a separate report⁴. The main conclusions are as follows:

- Unit information has been amended and updated (sections 1 and 2 of Report on Additional Work).
- The additional modelling of two level 3 neonatal units in different locations shows that the number of transfers / cot blocks and the total costs across the network do not vary significantly when the location of the units is altered (section 3 of Report on Additional Work). The location of the level 3 units significantly affects the ease of travel. In particular, the proportion of low birth weight babies and low rates of car / van ownership are highest in the deprived areas currently served by the neonatal units in Stoke and Wolverhampton.
- The rates of low birth weight and the percentage car / van ownership in areas served by each hospital vary considerably across the network (section 4 of Report of Additional Work). These variations have been taken into account in the consideration of the designation proposed for each unit.
- Private travel times from most other parts of Shropshire and mid Wales are longer than travel times from Shrewsbury and Telford. All private travel times from these areas are less than two hours (section 5 of Report on Additional Work) and car ownership is among the highest in the network. Public transport travel times are less than two hours from these areas to the neonatal unit at Wolverhampton. (Public transport to Stoke is not as good and travel times are between two and three hours from several of the areas served.)

Recommended Unit Designations

- 13 The recommended designations for neonatal units within the Staffordshire, Shropshire and Black Country Neonatal Network resulting from the designation process described above are given in Table 1. This configuration is Option H.

Table 1 Recommended unit designation levels

Unit	Recommended designation level
Dudley*	2
Wolverhampton*	3
Walsall*	2
Shrewsbury	2
Stafford	1
Stoke	3

* See section 15 in relation to Black Country Review recommendations.

⁴ Report on additional work completed following designation workshop (29 June 2005). Paper submitted to 5th October Staffordshire, Shropshire and Black Country Neonatal Network Board meeting.
DesignationReport(FinalJanuary2006)

14 Detailed analysis of the reasons for this recommendation is given in the papers from the two workshops and the additional work undertaken since August 2005. This analysis can be summarised as follows:

- More than two level 3 neonatal units in the network are not sustainable in terms of staffing and value for money. The number of families affected by the change to two level 3 units is fairly small, although these families may have to travel for several weeks.
- Considering the capacity and quality of each unit, access and value for money, level 3 units based at Wolverhampton and Stoke provide the best configuration for the greatest number of potential users of the service. (Access has been considered in terms of numbers of transfers of mothers and babies and travel times by public and private transport.) Change to the designation initially proposed for the neonatal unit at Shrewsbury is not considered appropriate because:
 - The additional information presented by the unit did not fundamentally alter the reasons for the designation initially proposed, especially considering the medium to longer term impact of the designation decision.
 - The additional data collected did not support a change to the proposed designation. In particular:
 - Public and private travel times from Shropshire and mid Wales, especially to Wolverhampton, are generally less than two hours and rates of car / van ownership are among the highest in the network.
 - Activity data for the Shrewsbury unit show that, in July 2003 to June 2004, only five babies of less than 27 weeks gestation were admitted. In the same period, 46 babies were ventilated for a total of 133 days (mean: 2.89 days)⁵. Given that level 2 units will ventilate babies whose condition is expected to improve within 48 to 72 hours, the number of babies who will need to be transferred out of Shrewsbury is small. The additional investment required to achieve level 3 standards for this number of babies would not represent value for money. If the unit were staffed appropriately as a level 3 unit there would be insufficient activity to maintain the skills and competence of these staff.
 - The proportion of low birth weight babies born in the Shrewsbury area is the lowest in network.
 - Currently there is a health economy wide review of acute hospital based services for Shropshire County the outcome of this review may effect maternity and paediatric services and consequently may require a review of the proposed designation at Shrewsbury.
- The units at Shrewsbury, Dudley and Walsall are currently large enough to sustain level 2 units which will provide good access to high quality neonatal care for most babies born after 27 to 28 weeks gestation.
- The unit at Stafford is smaller and would need considerable development in order to be able to provide care at a level greater than level 1.
- The overall configuration of units achieves the network's aim of providing the best possible care for the baby, mother and family **and** reasonable value for money.

⁵ Source: West Midlands Neonatal Report January 2005.
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15 The recommended designations for Dudley, Walsall and Wolverhampton are highly influenced by the current configuration of maternity and in-patient paediatric services in the Black Country. In particular, the review of the Walsall designation took into consideration the level of high risk obstetric work currently undertaken in the Trust. There is, however, a serious risk that this configuration will not be sustainable because both Walsall and Dudley are likely to have difficulties in staffing their paediatric rotas and for the reasons outlined above, this situation is likely to get worse rather than better. Furthermore, this configuration of neonatal units is only possible for as long as in-patient paediatric services and consultant-led maternity services are sustained at each hospital. The three hospitals have a total of approximately 12,000 births and a 3:1:1 configuration of neonatal units would support this level of activity with a considerable saving on workforce requirements and therefore a significant improvement in sustainability. Future services for this population must be viewed as a whole. It is not appropriate for neonatal services to drive change in other services, such as maternity and in-patient paediatrics. The issues for the other services, however, are likely to be similar to those in neonatology and would therefore indicate a need for change. The following recommendations specifically relating to the Black Country neonatal units are therefore made:

- 1 The proposed designation of neonatal units in Wolverhampton, Walsall and Dudley should be reconsidered if consultation on the Black Country Review proposals results in a decision to alter the configuration of consultant-led maternity and / or in-patient paediatric services OR if consultant-led maternity, neonatal or in-patient paediatric services in any of the three hospitals become unsustainable.
- 2 Additional staffing for the neonatal units in Walsall, Dudley and Wolverhampton is needed to reach the expected standards for the proposed levels of designation. Commissioners will want to be assured that this investment is robust, given the concerns about the sustainability of these services. It is therefore proposed that additional medical and / or nursing staff appointed to the level 2 units in Dudley and Walsall should be appointed to work across the Black Country units and the potential for rotation of posts between level 2 and level 3 units should be considered for all new appointments. This will have benefits in terms of skills maintenance as well as future-proofing the investment in staff. Commissioning arrangements will need to support these flexible appointments.
- 3 The neonatal units in Dudley, Walsall and Wolverhampton should start to work together, especially in areas of staff development and training.

Implementation

- 16 It is important that units do not unilaterally make changes to the care that is provided. There should therefore be no immediate changes to referrals and the services provided at each unit. 2006/07 additional funding for nursing staff is being sought.
- 17 Two pieces of work need to be undertaken before changes to patterns of care can be made:

A The West Midlands Specialised Services Agency (as commissioners of neonatal intensive care) and PCTs within the network need to consider, with Overview and Scrutiny Committees, whether the proposed changes comprise a significant variation in the service offered, whether formal public consultation is required and, if necessary, undertake this consultation.

B Development of an implementation plan covering:

- Identification of gaps in current capacity – in maternity as well as neonatal services
- Plans for developing capacity – for maternity as well as neonatal services
- Development of clinical, referral and referral-back guidelines – for mothers as well as neonates.
- Commissioning arrangements to support these developments.

These three pieces of work have to be undertaken in parallel as the capacity required will depend on the agreed clinical, referral and referral-back guidelines. This work will also provide additional detail to support public consultation, if required. It will need to address the issues identified during discussions with units (see section 6 of the Report on Additional Work).

These should both be completed by summer 2006 in order that additional funding for 2007/08 and beyond can be sought. A proposal will be brought to the December Network Board for the creation of a Designation Implementation Group to oversee this work and ensure that it links to work already taking place on guidelines development, workforce development, transport and capacity planning.

18 The designation of units will need to be kept under review. Further changes may be needed as circumstances alter. It is proposed that progress made and further changes required should be reviewed in 2008/09 at the latest.

Recommendations

19 The Network Board is recommended to:

- 1 Agree the proposed unit designations given in table 1.
- 2 Agree the approach to investment in services within the Black Country units described in section 15.
- 3 Agree that West Midlands Specialised Services Agency should contact Overview and Scrutiny Committees to discuss whether these changes comprise a significant variation in service.
- 3 Agree that work should start on planning implementation of the proposed designations, as described in section 17 (B).