

Board of Directors Meeting: Thursday 29 January 2009

BD2009.7

Subject	Perinatal Unit Development
Purpose of paper	To advise the Board of Directors of the review of perinatal services by commissioners; recommend investment in the Trust's perinatal services and seek the Board of Directors' approval to develop proposals for this further.
Board Lead(s)	CEO/Ms Amanda Middleton, Director of Operations, Division C
Background papers (if any)	Appendices: A - Activity: current and predicted B - Workforce Planning Strategy C- Financial Forecast D - Project organisation and governance arrangements E - Outline Programme of Work F - PHRU Report G - E-mail from South Central Specialised Services Commissioning Group
Action/decision required	The Board of Directors is asked to: <ul style="list-style-type: none"> ▪ Set the strategic direction for the unit, by supporting plans to develop a new Perinatal Unit, with the capacity to act as the Perinatal Centre for South Central North Neonatal Network. Agreeing that this should be the Trust's response to the review. ▪ Authorise the use of funds allocated for the redevelopment of the neonatal unit within this year's capital budget, to support the development of the Strategic Outline Case and the recommendations of the Workforce Planning Strategy. ▪ Approve the setting up of a Project Board to oversee the development. ▪ Approve a fundraising campaign. ▪ Approve an approach to the Strategic Health Authority and commissioners.

Key purpose	<u>Strategy</u>	Assurance	Policy	Performance
Strategic Goal(s)	To be world-leading teaching hospitals and an AHSC (SG2)			
Strategic Objective(s)	SO3 - To continue to strengthen the Trust's portfolio of specialist services and to consolidate and extend the catchment area from which patients for specialist services are drawn.			
Links to: Board Assurance Framework/ Trust Key Risks/Annual Health Check element(s)				
Also considered by	Planning Committee, 5 November 2008 Division C Board, 24 November 2008			

Resource and financial impact	<p>The capital cost of proposed developments is between £16.7 and £24.5 million, depending on the option chosen (these costs would be higher if the proposed new main entrance scheme does not proceed). £5 million has been put aside in the Trust capital programme and preliminary discussions with fundraising suggest that a maximum of £1 million could be raised (providing sufficient time was allowed for the campaign to be developed and run). This leaves a significant capital funding gap £11.7 - £19.5 million.</p> <p>The revenue costs of the recommended options (2&3) are £17.6 - £20.5 million. At current local prices this gives a deficit of between £2.69m and £3.65m. However, the indications from the commissioners are that they wish to move to accrediting units who will be asked to meet standards which will include British Association of Perinatal Medicine and DH approved workforce standards of 1: 1 nursing for Neonatal Intensive Care (as other intensive care areas); we anticipate therefore that the pricing will reflect this increased nursing standard and have therefore also shown an analysis using average Paed/Adult ICU and HDU prices which gives revenue surplus of between £216K and £1.9m.</p> <p>This would also be dependent on the, as yet unknown, implications of the implementation of HRG 4.</p> <p>Development requires significant recruitment of nursing staff. An outline Workforce Planning Strategy is included in Appendix B.</p>
Consideration of legal/equality/diversity/engagemen	

t issues	
Acronyms and abbreviations used	BAPM - British Association of Perinatal Medicine
Author	Claire Kenee-Webb

Business Case for:

Perinatal Unit Development		Ref: PC2008-043
Proposed date that revenue spend will begin:	2008/09 £5k to support Workforce Planning Strategy (Appendix B). 2009/10 £30k to support Workforce Planning Strategy. 2010/11 phase 1 of the expansion (pay costs associated with staffing the unit to DoH standards, training and development). Autumn 2011 building opens and cot numbers begin to rise.	
Proposed date that capital spend will begin:	2008/09 £10k required to develop the Strategic Outline Case (already in the Capital programme) 2009/10 £100k to develop the scheme sufficiently to support the Outline Business Case. Commence building 2010 (opening 2011/12).	
Review Dates	Business Case Reviews will be carried out at each of the major milestones, to ensure that the project assumptions are still valid, and the project is still required: <ul style="list-style-type: none"> ▪ Strategic Outline Case (SOC) ▪ Outline Business Case (OBC) ▪ Full Business Case (FBC) ▪ Contract signature ▪ Building completion ▪ Post completion (post project evaluation) The project will also be overseen by a Project Board, chaired by the Director of Division C (reporting back to Executive Board). Outline Programme in appendix E.	

1. Executive Summary

Recent Department of Health guidance has led commissioners to review the provision of neonatal services within the north half of the South Central region ('South Central North'). The review examined options for centralising intensive care into a maximum of two centres and only supporting HDU and SCBU care in the remaining units.

The NICU Project Group recommends that the Trust invest in the service, strengthening its position and increasing capacity, in order to become the regional perinatal unit.

The ORH neonatal unit is currently the only unit in South Central North offering intensive care together with neonatal surgery, paediatric cardiology and paediatric neurosurgery. A significant number of babies are transferred to Oxford (many in utero) for immediate surgery and/or intensive care, following delivery. If the intensive care service was not available these babies would be sent elsewhere, for both their early and on going

paediatric care. The long term implication of this is a loss of activity for paediatrics. Loss of neonatal intensive care in Oxford would also result in cessation of all high risk maternity activity with huge reputational and financial consequences.

Within the Trust demand for neonatal cots has out grown the space available. The lack of capacity has led to mothers and babies from within the Trust's catchment area being turned away. Efforts to accommodate demand into the available space have compromised the distance between cots, with infection control implications. The NICU Project Group therefore recommends that the Trust invest in new accommodation for the unit.

2. Overview of Current Service

- The unit is the only Perinatal Centre for South Central North, responsible for carrying out specialised medical, surgical, cardiothoracic and neurosurgical care. This involves supporting referrals to the specialist obstetrics service (prenatal diagnosis/feto-maternal medicine), leading to close involvement in the work of the cardiac and other paediatrics specialists, who take on the long term care of these babies).
- Approx 45% of the South Central North region's ITU/HDU babies are currently cared for in the unit.
- In addition to intensive care services the unit also provides special care for the local catchment area.

3. Key Drivers for Change

3.1 Capacity Issues - Meeting Network Objective (95% within network)

The demand for neonatal intensive care service has increased significantly over the last 10 years¹. Despite a significant increase in the Trust's intensive care provision in the last 3 years, demand for its neonatal services continues to exceed capacity.

A full activity analysis can be found in appendix A, key points are detailed below.

Intensive Care and High Dependency (16 cots)

- Intensive and high dependency care activity increased by 87% between April 2005 and March 2008.
- In 2007 the unit was unable to accept 177 requests for newborn intensive care (including 41 surgical babies) and 70 mothers booked to deliver at the John Radcliffe had to be transferred out to other hospitals due to a lack of capacity in the neonatal unit.

Special Care (18 cots)

The marked increase in the survival rate for preterm babies in the 1990s led to a greatly increased demand for special care cots.

- Over the last 5 years the local delivery rate has increased by 15.6%.
- Despite the increase in delivery rate, special care activity has been contained to 18 cots.

¹ See National Audit Office Report December 2007

- The unit is extremely efficient in its use of special care costs using 2.9 cots for every 1,000 deliveries (national average 4.4 cots). It is the most efficient user of special care cots in the South Central Neonatal Network.

The unit is frequently operating above the recommended 70% occupancy rate, often squeezing in extra cots and running above 100%. Despite all efforts 84 babies were refused specialist intensive care services from within the network last year. This threatens Oxford's reputation within the network and the Network's ability to meet the DoH target of keeping 95% of sick babies within the region.

There are several reasons for the increase in demand for neonatal intensive care. Firstly, the birth rate nationally and locally has increased every year since 2001. In addition, the trend in low birth weight babies is increasing in the UK and all developed countries. This is due in part to increase in births to older mothers and to a large increase in babies born by assisted conception. Predictive models suggest ongoing increase in birthrate due to high immigration combined with high fertility (PHRU report, appendix F).

3.2 Infection Control

Infection control remains a significant challenge for the Unit. Work to reduce the incidence of infection is hampered by overcrowding, with 16 cots currently filling an area which should only hold 7 cots, as well as by a lack of specific isolation facilities.

Tackling the infection control risk on the unit will be key, if the Trust is going to be able to demonstrate that it is meeting its obligations/targets outlined in:

- Health Act 2006
- NHS Operating Framework 2008/9
- The Standards for Better Health, monitored through the Annual Health Check
- Department of Health Neonatal Review Group Report 2003

3.3 Privacy & Dignity

The unit was designed in the late 1960s and opened in 1972 when the convention was for parents to view their babies through a window, and not go onto the ward. It was not designed with parent involvement in mind and so lacks vital space for consultation, and support accommodation for parents and carers.

The outdated design coupled with cramped conditions leading to overcrowding, compromises privacy and dignity for families who find themselves trying to adjust to their baby's illness and to process large amounts of complex information, at a very stressful and difficult time.

3.4 British Association of Perinatal Medicine (BAPM) Guidelines/Health Building Notes

The BAPM guidelines govern the design of a Neonatal Unit and its staffing. They have been accepted by the Department of Health as the standard at which all units should operate, and have been expanded for the Health Building Note, which is currently in draft, but includes figures for cot spacing etc.

It is anticipated that when South Central North remodel the provision of care across the region, tariffs will also be agreed (they are set locally at present), and that for a Trust to obtain the intensive care tariff they will need to be designated as an ITU provider, and will need to be able to demonstrate that a baby has been nursed on a 1 to 1 ratio.

3.5 Changes in Commissioning

DoH guidelines require networks to centralise the highest levels of neonatal care (ITU and surgical care in particular) in order to focus resources to meet the new BAPM guidelines. In response, the South Central PCT Alliance Neonatal Network, along with the South Central Specialised Services Commissioning Team, is seeking to remodel neonatal intensive care services (currently provided across 6 units), centralising the provision of the highest level of care (Level 3) see appendix F PHRU report. It is understood that two options for the provision of Level 3 care are being considered:

- Retaining the John Radcliffe Hospital as the only Level 3 unit.
- Designating a second Level 3 unit.

Oxford is best placed to expand as it already provides neonatal surgery, cardiology, neurosurgery, specialised radiology, and care for high risk pregnancies for the region. If Oxford does not expand then this work will go elsewhere. Oxford then runs the risk of being downgraded to a unit offering no specialised services, or only offering short term intensive care. Such a move would significantly disrupt the specialist obstetric services, specialist neonatal cardiology and other neonatal surgeries.

An e-mail from the South Central Specialised Services Commissioning Group is attached as Appendix G.

4. Options

The proposed options fall into two categories:

1. Capacity options – options for the number of cots
2. Options for configuration – options for how additional space could be provided

4.1 Capacity Options

The capacity requirements for the unit will depend upon how the Trust decides to strategically position the unit, and upon the outcome of the commissioners' service review.

(1)	12 ITU, 11 HDU, 24 SCBU	This size is based on the status quo plus future growth (this would only be an option if there were no changes in commissioning).
(2)	19 ITU, 11 HDU, 24 SCBU	This option supports a decision by the commissioners to opt for a 2 centre model for high level (ITU/HDU) care (Oxford being the larger of the two centres).
(3)	26 ITU, 12 HDU, 24 SCBU	This option would support a decision by commissioners to opt for having Oxford as the only centre offering high level (ITU/HDU) care.

4.2 Options for Configuration

The following options have been considered and discounted:

Do nothing	existing space is unable to support current work levels, and changes in commissioning described in 2.5 prevent the status quo remaining.
Redevelop existing space	cot numbers would have to be reduced by more than 50% to meet cot spacing requirements.
Extend existing space	insufficient space for expansion up or out.
Extend Children’s Hospital	unit needs to be adjacent to delivery suite

The following options are recommended for inclusion in the SOC:

(A) Complete New Build

Creating a self-contained Perinatal Unit, housing all clinical, support, and parent accommodation, adjacent to the delivery suite (opposite JR11 main entrance).

(B) New Build for all Clinical Space

Creating a Perinatal Unit as described above, but utilizing space within the existing Neonatal Unit, for parents and other non-clinical accommodation.

5. Financial Assessment

5.1 Capital Costs (£millions)

Size of Unit → Configuration of Unit↓	Option 1 23 ITU/HD 24 SCBU	Option 2 30 ITU/HDU 24 SCBU	Option 3 38 ITU/HDU 24 SCBU
(A) All New Build (impact of releasing space within Women’s Centre for other activities not quantified)	19.59	21.91	24.5
(B) New Build (clinical spaces only) Refurb (offices, parent and other support accommodation).	16.67	18.99	21.58

It should be noted that the capital costs would be higher if the proposed new main entrance scheme does not proceed. This is because the new accommodation would need to be built on stilts to attain the correct level.

5.2 Capital Funding

At present £5 million has been put aside within the capital budget, to support the redevelopment of the unit.

Preliminary discussions with Fundraising suggest that a maximum of £1 million could be raised (providing sufficient time was allowed for the campaign to be developed and run).

5.3 Revenue Implications

The table below summarises the revenue implications of the 6 options. More detail is provided in Appendix C.

	All New Build (£millions)			Clinical New Build/Refurb Support (£millions)		
Size of Unit → ALL NEW BUILD	Option 1 23 ITU/HDU 24 SCBU	Option 2 30 ITU/HDU 24 SCBU	Option 3 38 ITU/HDU 24 SCBU	Option 1 23 ITU/HDU 24 SCBU	Option 2 30 ITU/HDU 24 SCBU	Option 3 38 ITU/HDU 24 SCBU
	£m					
Direct pay costs	8.47	10.58	11.76	8.47	10.58	11.76
Direct non-pay costs	1.13	1.48	1.86	1.13	1.48	1.86
Direct costs (sub total)	9.60	12.06	13.62	9.60	12.06	13.62
Indirect pay costs	0.82	0.96	1.10	0.82	0.96	1.10
Indirect non-pay costs	0.72	0.85	0.98	0.72	0.85	0.98
Indirect costs (sub total)	1.54	1.81	2.08	1.54	1.81	2.08
Capital Expenditure	19.59	21.91	24.50	16.67	18.99	21.58
Capital Charge and Depreciation	1.64	1.87	2.12	1.2	1.43	1.68
Contribution to Corporate overheads @ 15%	1.92	2.36	2.66	1.85	2.29	2.61
Total Revenue Cost	14.69	18.10	20.50	14.18	17.59	20.00
Income at current prices	11.84	14.45	17.31	11.84	14.45	17.31
Net Revenue Implication (Deficit)	(2.85)	(3.65)	(3.20)	(2.34)	(3.14)	(2.69)

The income above is shown at current local prices. Below at appropriate intensive care prices for the all new build options. See appendix C.

2. Analysis of cot day prices - to close the gap (using average Paed / Adult ICU & HDU prices)	Original+20%	Option 1	Option 2	Option 3
Increase ICU from £1228 to £1850	£1362180	£2043270	£3235178	£4427085
Increase HDU from £777 to £939	£354780	£487823	£487823	£532170
Increase SCBU at £479 from £499	£105120	£140160	£140160	£140160
Extra income	£1822080	£2671253	£3863160	£5099415
Revised Surplus / (Deficit)	£1140837	-£173749	£216079	£1903371

It is suggested that discussions would need to be held with commissioners about whether they would be willing to support the development of the service through an enhanced local tariff. However, this would be dependent on the, as yet unknown, implications of the implementation of HRG 4.

It is recognised that an increase in NICU capacity may have an impact on other services e.g. paediatric surgery. These services will need to assess whether or not they need to develop their own business case to address this impact.

6. Assessment of Risk to Delivering the recommended option

6.1 Workforce Planning

Workforce planning has been identified as the key area of risk for this project. To mitigate this risk the project group has developed an outline HR strategy (appendix B), which the group recommends is developed further by dedicated HR resource.

7. When will the impact and intended effect be reviewed and reported on?

It is proposed that a Project Board be established (membership outlined in appendix D) to oversee the project from the development of the SOC through to post project evaluation.

Proposals are for the Director of Division C to Chair the Board (or the Chair of Division C Board), reporting back to Commercial Committee and Executive Board as appropriate.

Formal reviews of the project will take place in line with DoH best practice, using the Office of Government Commerce gateway process.

Progress will be monitored against the following project objectives that have been produced to reflect strategic, national, regional, Trust and service objectives.

- Securing long term future for service as the Perinatal Unit for South Central North.
- To increase capacity in order to fulfill caseload needs for neonatal medical, surgical, cardiological and neurosurgical patients within South Central North.
- Achieving the target of retaining 95% of activity within region (or not hindering it).
- To stop the transfer of mothers, many with high risk pregnancies, out of the JR to other hospitals due to a lack of capacity.
- Reducing HCAs and avoiding recurrent epidemics of infection between babies on the unit. Contributing to an improvement in the Trust's overall HCAI record, and healthcare commission's annual report score.
- Increasing the unit's contribution to Trust surpluses.
- Ensuring that the unit is able to comply with the Health Act 2006, BAPM, DOH and Estates guidance.
- Improving health outcomes (by minimising infections and therefore interventions).
- Improving privacy and dignity.
- Becoming the hospital of choice for high risk pregnancies, able to support mother and baby, at all levels (obstetrics, fetal maternal, perinatal, medical (including cardiology)) and surgical) on one site, in line with DoH publication 'Maternity Matters' in 2007.
- Strengthening Academic Links.
- To provide a safe working environment for staff.
- To preserve and build services offered by the Prenatal Diagnosis Unit, the Fetal Maternal Unit and High Risk Pregnancy Team within the Women's Centre.

8. Implementation Plan

A Project Initiation Document (PID) will be completed for the project, a summary of the governance section can be found in appendix D. The PID will be reviewed in detail by Project Board, who will be responsible for managing the project.

At this stage Board members are asked to note progress made on the development of the PID, and approve the setting up of a Project Board to manage the project, reporting back to Executive Board through the Chair (Director of Division C).

Appendix E outlines the project programme.

9. Equality Impact Assessment

An Equality Impact Assessment will be carried out as part of the preparation work for the Strategic Outline Case (SOC).

As part of this work the Project Team will seek to identify opportunities, throughout the design and construction phases of the project, to involve representatives from groups identified as at risk of being disadvantaged.

10. Recommendation to the Board of Directors

Board of Directors members are asked to:

- Set the strategic direction for the unit, by supporting plans to develop a new Perinatal Unit, with the capacity to act as **the** Perinatal Centre for South Central North Neonatal Network. Agreeing that this should be the Trust's response to the review.
- Authorise the use of funds allocated for the redevelopment of the neonatal unit within this year's capital budget, to support the development of the Strategic Outline Case (exploring the options outlined in this paper) £10k 2008/9 (£100k 2009/10), and the setting up of a bespoke HR team to support the delivery of the HR strategy (£5k bespoke team (2008/9), £15k bespoke team plus £15k marketing budget 2009/10).
- Approve the setting up of a Project Board to oversee the development (outlined in appendix D).
- Approve a fundraising campaign.
- Approve an approach to the Strategic Health Authority and commissioners.

Amanda Middleton
November 2008

Activity (Local and Regional)

ICU

	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Activity	3,141	2,933	4,085	2,266	2,067								
Income	2,365,516	2,738,544	3,515,676	2,719,200	2,537,322								
Beds			16	8	8								
Income /bed			219,730	339,900	317,165								
Unit price			861	1,200	1,228	1,228	1,228	1,228	1,228	1,228	1,228	1,228	1,228
Activity Option 1						2,190	2,190	3,011	3,285	3,285	3,285	3,285	3,285
Activity Option 2						2,190	2,190	3,011	4,106	4,928	5,201	5,201	5,201
Activity Option 3						2,190	2,190	3,011	4,106	4,928	5,749	6,570	7,118
Beds Option 1						8	8	12	12	12	12	12	12
Beds Option 2						8	8	12	15	18	19	19	19
Beds Option 3						8	8	12	15	18	21	24	26
Income Option 1						2,688,309	2,688,309	3,696,425	4,032,464	4,032,464	4,032,464	4,032,464	4,032,464
Income Option 2						2,688,309	2,688,309	3,696,425	5,040,580	6,048,696	6,384,734	6,384,734	6,384,734
Income Option 3						2,688,309	2,688,309	3,696,425	5,040,580	6,048,696	7,056,812	8,064,928	8,737,005

Suggested occupancy %

75.00%

Commissioner	%
South Central	80
Northampton	15
Other	5

HDU

	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Activity	0*	0*	0*	2,329	1,982								
Income	0*	0*	0*	1,770,040	1,540,690								
Beds				8	8								
Income /bed				221,255	192,586								
Unit price				760	777	777	777	777	777	777	777	777	777
Activity Option 1						2,190	2,190	2,601	3,011	3,011	3,011	3,011	3,011
Activity Option 2						2,190	2,190	2,601	3,011	3,011	3,011	3,011	3,011
Activity Option 3						2,190	2,190	2,601	3,285	3,285	3,285	3,285	3,285
Beds Option 1						8	8	10	11	11	11	11	11
Beds Option 2						8	8	10	11	11	11	11	11
Beds Option 3						8	8	10	12	12	12	12	12
Income Option 1						1,702,377	1,702,377	2,021,573	2,340,768	2,340,768	2,340,768	2,340,768	2,340,768
Income Option 2						1,702,377	1,702,377	2,021,573	2,340,768	2,340,768	2,340,768	2,340,768	2,340,768
Income Option 3						1,702,377	1,702,377	2,021,573	2,553,565	2,553,565	2,553,565	2,553,565	2,553,565

Suggested occupancy %

75%

Commissioner	%
South Central	95
Other	5

* Activity figures pre 2006-07 not split between NICU/NHDU

SCBU

	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Activity	0	0	0	5,701	6,125								
Income	0	0	0	2,667,697	2,932,200								
Beds			0	18	18								
Income /bed				148,205	162,900								
Unit price				468	479	479	479	479	479	479	479	479	479
Activity Option 1						5,256	5,256	6,935	7,008	7,008	7,008	7,008	7,008
Activity Option 2						5,256	5,256	6,935	7,008	7,008	7,008	7,008	7,008
Activity Option 3						5,256	5,256	6,935	7,008	7,008	7,008	7,008	7,008
Beds Option 1						18	18	24	24	24	24	24	24
Beds Option 2						18	18	24	24	24	24	24	24
Beds Option 3						18	18	24	24	24	24	24	24
Income Option 1						2,515,882	2,515,882	3,319,567	3,354,510	3,354,510	3,354,510	3,354,510	3,354,510
Income Option 2						2,515,882	2,515,882	3,319,567	3,354,510	3,354,510	3,354,510	3,354,510	3,354,510
Income Option 3						2,515,882	2,515,882	3,319,567	3,354,510	3,354,510	3,354,510	3,354,510	3,354,510

Suggested occupancy %

80%

Commissioner	%
South Central	95
Other	5

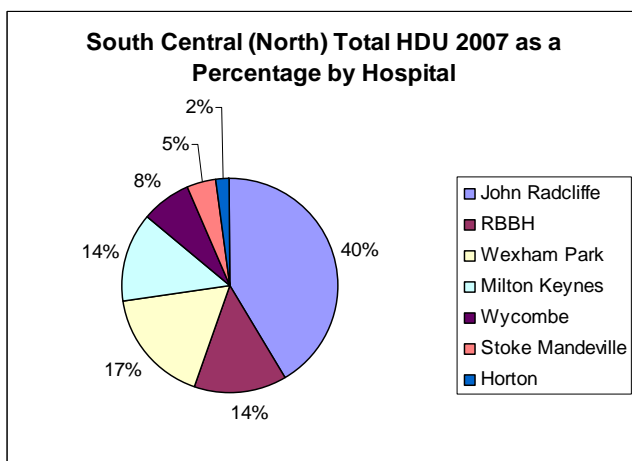
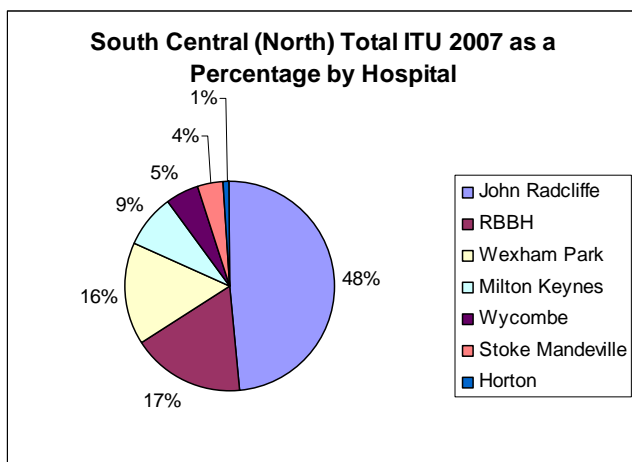
ORH Occupancy Rates 2006/7

	Occupancy Rates			
	ITU	HDU	SCBU	TOTAL UNIT
Jan	78.23	71.77	101.61	89.09
Feb	59.48	67.24	94.44	79.82
Mar	76.21	45.96	98.02	80.65
Apr	60.42	80	67.78	68.92
May	77.82	66.13	70.79	71.35
June	83.33	95.84	79.63	84.31
Jul	71.77	132.26	69.71	84.91
Aug	48.38	113.31	97.85	89.85
Sep	51.67	66.25	87.22	73.92
Oct	54.03	47.98	91.76	72.58
Nov	125.42	22.5	86.30	80.49
Dec	126.21	45.97	62.00	73.34
Totals	76.13	71.35	83.91	79.12

NOTES:

	Indicates a breach of DoH guidelines on occupancy (max level 70%)	<u>Average Occupancy Rates (DoH recommendation 70%)</u>	
	Indicates 2(or less) cots away from breaching guidelines	ITU 75%	SCBU 84%
	More than 2 cots from breaching guidelines	HDU 71%	

Network Activity - Distribution of ITU and HDU in South Central North Perinatal Network



2007	John Radcliffe	RBBH	Wexham Park	Milton Keynes	Wycombe	Stoke Mandeville	Horton
ITU	2248	811	729	398	224	196	39
HDU	2108	709	882	692	386	232	95

SUMMARY

SCBU

SCBU use is predominately dictated by local delivery rates, although in Oxford it is slightly increased due to the work undertaken on the fetal medicine unit. The local delivery rate has increased 15.6% over the last 5 years.

The HBN (Health Building Note) for Neonates recommends that an average 4.4 SCBU cots be provided per 1000 live births. This would lead to Oxford needing 27 cots, at present the unit has 18 cots and clinical staff believe it would not be necessary to increase to the full complement of 28, due to the efficient usage of cots on the Unit.

Recommendation:

All options outlined except for the Oxfordshire only model

SCBU is increased in size from 18 cots to 24 cots, anticipating a growth in the delivery rate of 10-20% over the next 10-20 years (sized for 20%).

ITU/HDU

As discussed in the main paper, ITU/HDU care is provided from a number of units across the region, and commissioners are currently considering a move to providing the service from 1 or a maximum of 2, units within the North half of South Central Region (in line with Department of Health guidelines).

The HBN for Neonates recommends 0.75 ITU cots and 0.70 HDU cots are made available for every 1000 births. Births in the region in 2006 were approximately 28000 (CEMACH data 2006) therefore this estimates ITU cot needs as 22 and 20 for HDU for the region as a whole.

Recommendation:

Option 1 – Status Quo

- Allow for 20% growth (+ contingency) due to other factors resulting in a higher need for ITU/HDU – advances in technology, increase in babies born to older women etc.

ITU is increased in size from 8 to 12 cots and HDU increased from 8 to 11 cots.

Option 2 – Centralisation (2 centre) with Oxford being the largest

- Comparisons taken from the South of South Central Region
- Allows for 20% growth over 20 years and contingency of 5 cot spaces added.

ITU is increased in size from 8 to 19 cots and HDU increased from 8 to 11 cots.

Option 3 – Centralisation (1 centre) with Oxford as that Centre

- 2 cots removed as economies of scale achieved
- HDU cots increased due to lack of second centre and contingency of 5 cot spaces added
- Allows for 20% growth over 20 years.

ITU is increased in size from 8 to 26 cots and HDU increased from 8 to 12 cots.

Workforce Planning Strategy - Overview

This document has been produced to support the plans outlined in the Neonatal Expansion Business Case. At present the document concentrates on nursing manpower as this is the only significant area of growth. The project group recommends that project management support is sourced to develop the plan fully, for all staff groups.

Skill Mix

Banding	max use of old build	Option 1	Option 2	Option 3
Cots	40	47	54	62
Cot mix	10ITU/10HDU/ 20 SCBU	12ITU/11HDU/ 24 SCBU	19ITU/11HDU/ 24 SCBU	26ITU/12HDU/ 24 SCBU
Band 8b	1	1	1	1
Band 8a	8.5	9.5	13	13
Band 7	22	25	26.5	27.5
Band 6	38.5	45	64	76
Band 5	47	53	68	87
Band 4	12	19	21	21
Total	129	152.5	193.5	225.5

The table above uses BAPM nursing standards (against which regional tariffs will be set in the future):

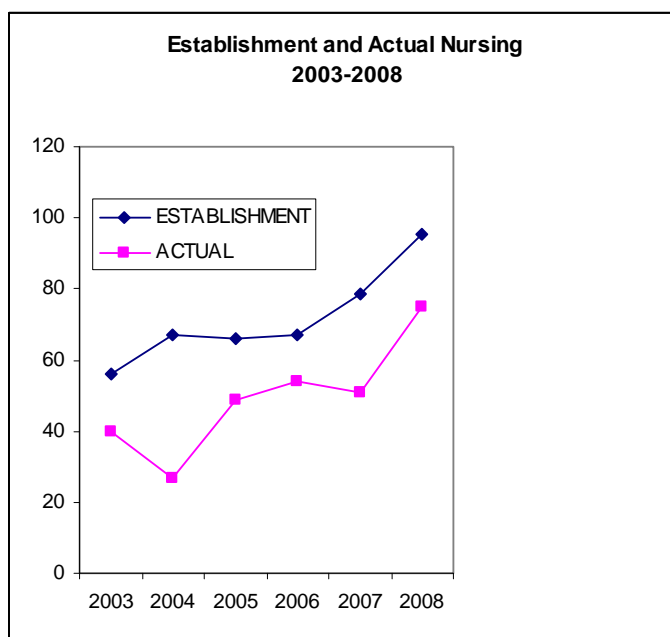
ITU - 1 nurse: 1 baby

HDU - 1 nurse: 2 babies

SCBU- 1 nurse: 4 babies

Sourcing Staff

The graph below represents the recent history of recruitment in the neonatal unit



Last year we gained 24 WTE nurses over the course of the year – this was partly due to return from maternity leave but also new recruitment. Recruitment was through informal enquiries and advertising. To date, the recruitment has not been bespoke to the neonatal unit. The rolling recruitment program for children’s has not significantly improved the rate of recruitment on the neonatal unit, although it has contributed to ensuring that nurses with an interest in neonatal care are targeted and recruited.

The following measures have been identified as key to achieving the level of recruitment required for the new unit.

- Early adoption of specific neonatal advertising both in UK and abroad may improve take up during first year. Increased educational support for new graduates within the unit, rotation with the Horton.
- Working with the network to support experienced staff currently working in units which will become HDU/SCBU only units, to move across to the Trust.
- Additional recruitment to neonatal 405 course run through Oxford Brookes
- Targeting midwives and adult/children’s intensive care nurses
- International recruitment –particularly targeting Australasia, Scandinavia, Europe and Philippines –recruitment from these countries has been successful in other large UK neonatal units
- Conducting marketing road-shows
- Enticing new graduates through links with Oxford Brookes University, including increasing NNU placements (yr 3) with confirmed offers of employment.
- Increasing the educational roles within the unit to support the development of staff new to this aspect of care

Training

RCN 405 training will be required as the largest increase will be in nurses able to provide intensive care. It may be necessary to train a small number of nurses on the Advanced Neonatal Nurse Practitioner (ANNP) course. The number of nursery nurses will not increase significantly therefore we would not anticipate significant training issues for this group of staff. Although there are opportunities to explore the contribution of Assistant Practitioner Post

Induction time would need to be factored into the recruitment programme, together with management/ existing staff time for recruitment, induction and 'on the job' training.

Timetable for Recruitment

We would hope to recruit a minimum of 1.5 nurses per month. Increased throughput of nursing students through Oxford Brookes should be explored to commence September 2009 – if this were to occur the nursing numbers may swell significantly following course completion so cots may not necessarily open one at a time. Projections for timing and opening of cots are shown below – note that our current WTE staffing (75.17 WTE) should allow us to nurse 27 cots at minimum staffing levels; our actual activity levels are higher than this (due to occupancy rates which are greater than the recommended 70%).

	Anticipated nursing (WTE)	approximate cots at minimum nursing	approximate cots at BAPM nursing
Nov-08	75.17	27	23
Nov-09	93.17	34	29
Nov-10	111.17	40	34
Nov-11	129.17	46	40
Nov-12	147.17	50	44
Nov-13	165.17	54	48
Nov-14	183.17	61	52
Nov-15	201.17		56
Nov-16	219.17		61

Using the model above one can give approximate times for achieving the required cot numbers for each model.

	Max old build	option 1	option 2	option 3
Minimum nursing standards	Nov-10	Dec-11	Nov-13	Dec-14
BAPM standards	Nov-11	Nov-13	Jan-15	Jan-16

Constraints

Resources

- within the central HR team to support the processing of posts – application processing, induction training etc. Limiting the number of posts that can be processed at one time.
- Management time, to shortlist for posts, attend interviews etc. and undertake any workforce project management work.

- Insufficient human resource currently available within the local health economy to fill the new nursing posts.
- **Budget**
 - A dedicated marketing budget is required to support national and international campaigns.
 - Funds will be required to support employees in training, or being inducted, prior to the opening of the building.
- **Training**
 - Lead in times for training courses.
 - Availability of training places.
- **High cost of living**
 - High cost of living within Oxford and commuting issues may deter some candidates -consider offering pay premia (in line with PICU).

Delivering the Strategy

The project group recommend that a HR project management post be funded £15k per annum, plus marketing budget, to develop and then deliver the Workforce plan

Neonatal Expansion - Summary (New SCBU , New Neonatal , Refurbished support areas)

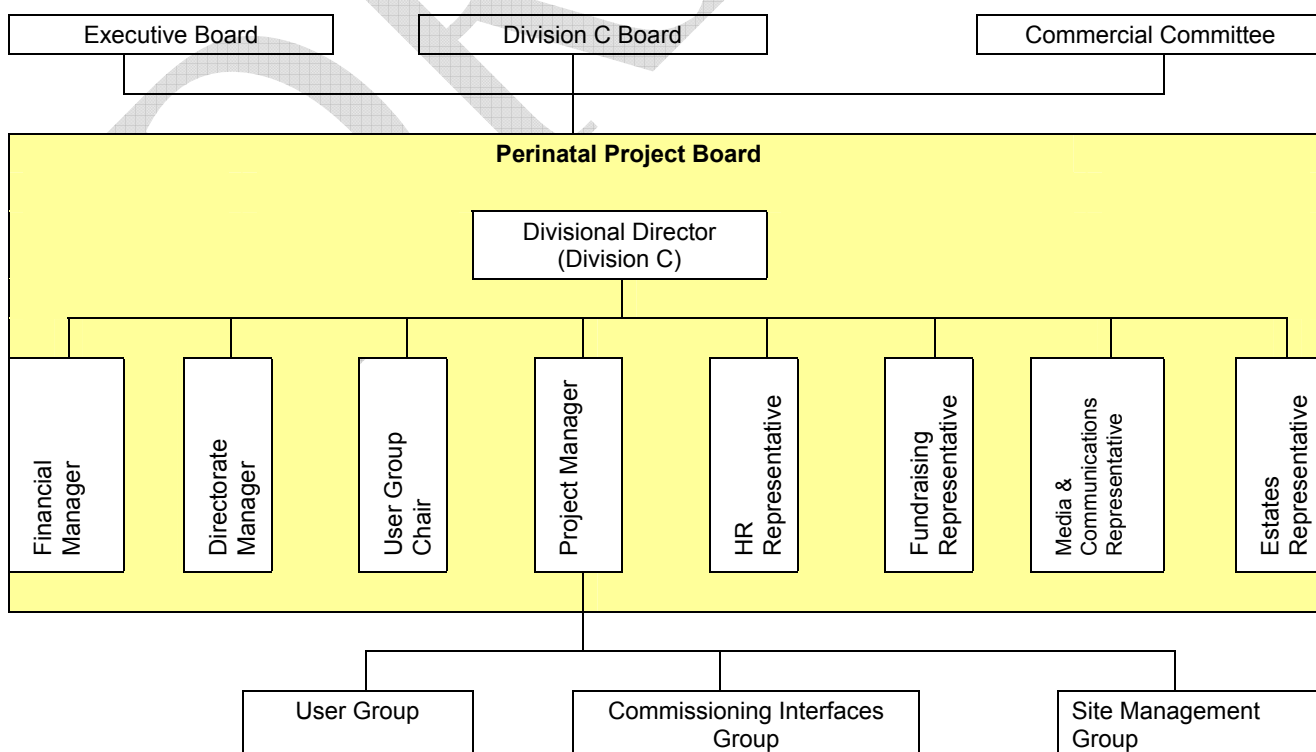
(Horton excluded)

	Existing	current + 20% growth Option 1	2 centre model Option 2	Single centre model Option 3
ICU cots	8	12	19	26
HDU cots	8	11	11	12
SCBU cots	18	24	24	24
	<u>34</u>	<u>47</u>	<u>54</u>	<u>62</u>
A. Direct revenue costs				
Staff				
Consultants (**ignores staff used elsewhere)	£946645	£958628	£1198285	£1198285
Junior Medical	£1180971	£1346265	£1535225	£1535225
Nursing	£3993053	£5914238	£7509011	£8692898
Scientific & Therapeutic	£0	£0	£0	£0
Other Clinical	£0	£0	£0	£0
Non Clinical	£162798	£250434	£336460	£336460
Total Staff	£6283467	£8469565	£10578981	£11762868
Non-Staff	£795674	£1128799	£1481801	£1862901
Subtotal Direct costs	£7079141	£9598364	£12060782	£13625769
B. Indirect revenue costs				
Staff				
Radiological Sciences (80 %)	£67909	£94400	£127200	£152800
Clinical Measurement	£8876	£15704	£15704	£15704
Pharmacy (80%)	£112626	£148771	£193611	£231689
Dieticians (80%)	£5862	£8994	£12125	£13890
Physiotherapy (80%)	£64183	£96874	£110530	£126370
Laboratory Medicine (80%)	£181229	£250522	£287834	£330476
Theatres/Anaesthetics (assumed N/A)	£0	£0	£0	£0
Critical Care (assumed N/A)	£0	£0	£0	£0
Others - Estates & Facilities	£67169	£202311	£214991	£229464
Total Staff	£507854	£817576	£961994	£1100394
Non Staff				
Radiological Sciences (20%)	£16977	£23600	£31800	£38200
Clinical Measurement	£0	£10900	£10900	£10900
Pharmacy (20%)	£28156	£37193	£48403	£57922
Dieticians (20%)	£1466	£2248	£3031	£3473
Physiotherapy (20%)	£16046	£24218	£27632	£31593
Laboratory Medicine (20%)	£45307	£62631	£71958	£82619
Theatres/Anaesthetics (assumed N/A)	£0	£0	£0	£0
Critical Care (assumed N/A)	£0	£0	£0	£0
Others - Estates & Facilities	£125755	£345661	£373836	£406011
Equipment Maintenance	£117715	£209199	£277657	£350724
Total Non Staff	£351422	£715650	£845218	£981441
Subtotal Indirect costs	£859276	£1533226	£1807212	£2081835
Equipment - capital expenditure	£0	£1106053	£1961782	£2875116
Buildings - capital expenditure	£0	£15561448	£17028537	£18705210
C. Capital Expenditure	£0	£16667501	£18990319	£21580326
Equipment - capital charges	£59782	£212971	£331486	£457980
Buildings - capital charges	£22752	£985170	£1096485	£1223703
D. Capital Charge & Depreciation	£82534	£1198141	£1427971	£1681683
E. Contribution to Corporate Overheads @ 15%	£1203143	£1849460	£2294395	£2608393
F. TOTAL REVENUE COST	£9224094	£14179191	£17590360	£19997680
Income (as per SLAM report - Horton excluded)				
PCT - Retrieval Service (ad hoc line)	£317848	£317848	£317848	£317848
PCT - Day Case (100% JR)	£842	£1164	£1337	£1535
PCT - Market Forces Factor (82.4% JR)	£146848	£202996	£233230	£267782
PCT - Retrievals out of Region (manual line)	£53000	£53000	£53000	£53000
PCT - ICU (assuming 75% occupancy) - £1228	£2689320	£4033980	£6387135	£8740290
PCT - HDU (assuming 75% occupancy) - £777	£1701630	£2339741	£2339741	£2552445
PCT - SCBU (assuming 80% occupancy) - £479	£2517624	£3356832	£3356832	£3356832
PCT - NEL (82.1% JR)	£28556	£39475	£45354	£52073
PCT - NELNE (82.7% JR)	£808267	£1117310	£1283718	£1473898
PCT - NELXBD (100% JR)	£951	£1315	£1510	£1734
PCT - OPCHFA (74% JR)	£214028	£295862	£339927	£390286
PCT - OPCHFU (64% JR)	£42756	£59105	£67907	£77968
PCT - OPCHFA (74% JR)	£867	£1198	£1376	£1580
Private Patient	£0	£0	£0	£0
R&D	£0	£0	£0	£0
Other non NHS clinical	£0	£0	£0	£0
Charitable Funds	£0	£0	£0	£0
Other - Brookes University contribution to LP post	£20313	£20313	£20313	£20313
Total Income	£8542850	£11840138	£14449229	£17307585
SURPLUS (DEFICIT)	-£681243	-£2339053	-£3141131	-£2690095

4. Project Organisation Structure and Governance

The following diagram illustrates the structure in place to manage the Perinatal Project.

- The project is sponsored by Amanda Middleton (Director Division C), and managed on a day to day basis by the Project Manager.
- The Project Manager is responsible for managing the User Group, Site Management Group and Commissioning Interfaces Group.
- **Project Board** oversees the management of the project on behalf of Divisional Board. Ensuring that risks are managed, budgets adhered to, and that the project is completed in a timely manner. Project Board reports to Commercial Committee, Divisional Board, and, through the Divisional Director, Executive Board.
- **The User Group** will be made up of Perinatal Centre representatives and include a patient representative. The group will be responsible for progressing the design, planning the move and activity during the move period, assessing risk, and developing new working practices and operational policies (taking into account the latest guidance for neonates and lean thinking principles).
- **The Site Management Group** will include representatives from Estates, the Project Management Company and the Project Manager. The group will be responsible for monitoring progress on site, site relations, the building programme and joint elements of the commissioning programme.
- **The Commissioning Interfaces Group** will include representatives from support services, including FM, IM&T, Security and Estates and will be chaired by the Project Manager. The group will be responsible for ensuring that all the elements of the commissioning programme which the Trust is responsible for are delivered on time.



Outline Project Plan, Perinatal Centre Development

Activity	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10	
Business Case EB Paper																				
Planning Committee																				
Paper taken to EB																				
<i>Network decision regarding model of service delivery.</i>	☆																			
SOC																				
Project Board formed																				
Detailed workplan for SOC agreed																				
SOC completed																				
SOC to Divisional Board																				
SOC to Executive Board																				
Letters of support sort from commissioners and network																				
SOC to Trust Board																				
SOC to SHA																				
OBC																				
1 to 200 designs worked																				
Outline planning sought																				
OBC completed																				
OBC to Divisional Board																				
OBC to Executive Board																				
OBC to Trust Board																				
OBC to SHA																				
FBC																				
1 to 50 designed worked																				
Planning permission sought																				
FBC completed																				
FBC to Divisional Board																				
FBC to Executive Board																				
FBC to Trust Board																				
FBC to SHA																				
Mobilisation																				
Trust Board GMP contract approval																				
Mobilisation period (contractors)																				
Building begins																				
																				☆

NB: Public consultation has not been built into the programme, but may be required.



Configuration of Neonatal Units in the North of South Central

Final Report

September 2008

Martin Allaby
Mike Griffin
Damian Haywood

Executive Summary

Background

During 2003 the Thames Valley Neonatal Group had a series of meetings to look at neonatal intensive care services within the region, in light of the new British Association of Perinatal Medicine (BAPM) guidelines. A decision was made with the commissioners to increase the cots in Oxford and to continue intensive care in the District General Hospitals (DGHs) within agreed network guidelines. In addition a 'cot bureau' and transport service would be set up. The plan was then to review arrangements after a period of time to decide whether further reconfiguration of services was required.

Since the 2003 exercise was undertaken the Department of Health (DH) has reviewed neonatal intensive care services. The DH review concluded that taking forward the recommendations for best practice requires local reviews coordinated under regional specialist commissioning arrangements. Local planning should incorporate the identifying and enhancing of capacity of the level 3 units and directing resources to staffing of all levels of unit throughout the network matching their workload. The DH also recommends that first consideration be given to designating the units within the network and increasing the capacity of level 3 units.

Objectives

The South Central South Central Neonatal Network Neonatal Network along with the South Central Specialised Services Commissioning Team commissioned the PHRU to:

- Model the impact of movement of activity based on two level 3 centres across the network, cot requirement and the implications for obstetric/maternity services
- Review impact of changes to configuration on neonatal nursing and medical staffing
- An appraisal of travel times and transport links between networked hospitals
- Review of maternity population, its changing profile and anticipated trends

Methods

The PHRU project team has:

- Reviewed the maternity population using the latest trend information from various national, regional and local sources
- Provided maps and tables of the average travel time by and public transport between each of the neonatal units in the network
- Modelled the impact of designating a current Level 2 unit as a second Level 3 unit, and modelling the impact of increasing capacity at the current Level 3 unit

Key Findings

- Demand for neonatal intensive care within the network is rising based on the increase in the birth rate at each hospital and within the network as a whole
- Patient flows: there is flow in and out of the network at all units, with the exception of babies in Berkshire East going to Frimley Park in Surrey, the numbers are negligible
- Babies within the network are not routinely transferred for medical care. Babies are only routinely transferred to tertiary centres for surgical/specialised care and all Level 2 units reported difficulty in obtaining cots at the John Radcliffe due to a lack of capacity
- Level 2 units are happy to continue to provide an intensive care service, however only Buckinghamshire hospitals are providing the recommended 1:1 level of nursing care

- All level 2 units do not provide dedicated medical cover 24 hours a day
- According to SEND data for 2007 there were 197 babies cared for at a Level 1 or Level 2 unit, that based upon BAPM criteria should have been cared for at a Level 3 unit
- All Level 2 and the Level 3 unit have expansion plans driven by the perceived increase in demand due to a rising birth rate

Turning any of the existing Level 2 units into a BAPM compliant Level 3 unit is going to require considerable investment in staffing to provide 24 hr consultant cover and split rotas for more junior medical staff. Wexham Park and Royal Berkshire have aspirations to become a Level 3 unit.

Under each of the scenarios that we have modelled, regardless of which Level 2 neonatal unit is selected to become the second Level 3 neonatal intensive care centre, there would be additional demand for medical intensive care at the John Radcliffe Hospital

Options for the future

The following four options for the future have been identified and discussed with commissioners:

- Maintain Status Quo
- Expand the number of cots at the John Radcliffe Hospital only
- Designate a second Level 3 unit and expand the number of cots at the John Radcliffe Hospital
- Distribute available resources equally between the John Radcliffe Hospital and the existing Level 2 units

Recommendations

- The surgical service within the network is suffering due a lack of capacity at the John Radcliffe tertiary referral centre. Expansion at the John Radcliffe is required to ensure that babies do not go out of network for surgical care
- A second level 3 unit would benefit the network. However, further extensive work is required to fully confirm this
- Consider the resources required to develop a second Level 3 unit within the network in the next five years
- Consultation is required between the network, commissioners and individual units regarding current expansion plans each unit has developed
- The network should ensure that guidelines and protocols are agreed network wide, especially with regards to care babies of a gestational age less than 28 weeks and under 1kg

Appendix G

From: Warr, Teresa [mailto:Teresa.Warr@hampshirepct.nhs.uk]
Sent: 20 November 2008 12:15
To: Adams Eleri (RTH) ORH
Cc: Jupp, Simon; Chambers, Debbie; Doughty, Louise; Ward, Joan; Covill Matthew (RTH) ORH; Shepherd Clare (RTH) ORH
Subject: RE: neonatal service in Oxford

Dear Eleri

Thank you for your email concerning the neonatal unit in Oxford. As discussed when we met recently and visited the unit, the PHRU report clearly identifies that there is insufficient capacity within the Oxford service to meet the needs of babies requiring surgery. When we presented the PHRU report to our PCTs we identified the immediate priority for 2009/10 was to work with the ORH to explore the potential for the urgent expansion of cots to cope with the surgical workload. As the current neonatal unit facilities are so far from modern standards we recognise the significant challenge this poses and the urgent need to develop longer term plans.

With regard to taking forward the recommendations in the PHRU report and the reconfiguration of neonatal services in "North" South Central, the SCG needs to develop a formal work programme to ensure we commission to an appropriate level and quality of service for our population and the Trust will be fully involved with this process. This will include the development of a service specification and we will be seeking providers to demonstrate their capability to meet our requirements.

I therefore confirm our support for an expansion in capacity at the ORH to meet the neonatal surgical needs of our population in "North" South Central. In order for us to include this expansion in our operational plan please can you identify the increased capacity the Trust feels it could provide in 2009/10 and onwards.

As mentioned, previously the medium term planning around the need for a second level three centre requires considerable work that will need formalising as part of the SCG work programme. Resourcing of this has yet to be identified.

Please can the Trust identify what increased capacity can be provided in 2009/10 with timescales and costs. I suggest that this is picked up as part of the regular monthly performance meetings with the Trust.

Regards

Teresa

Teresa Warr
Head of Commissioning
(Acute and Children's Specialised Services)
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