Stakeholder ‘You Said, We Did’ Engagement Report

Proposed Reconfiguration of Specialised Neonatal Services in Bristol

NHS England and NHS Improvement

North Bristol NHS Trust

University Hospitals Bristol NHS Foundation Trust

1. Summary

Bristol has two well respected neonatal intensive care units about 4 miles apart at University Hospitals Bristol NHS Foundation Trust (UH Bristol at St Michael's hospital), and at North Bristol NHS Trust (NBT at Southmead hospital). Both units function independently as Neonatal Intensive Care units (NICUs). They provide care to babies within the Bristol, North Somerset and South Gloucestershire (BNSSG) region as well as to babies from the wider South West Operational Delivery Network (SWODN) footprint as and when needed.

The purpose of this report is to describe a programme of clinical, patient and public engagement that was conducted between July 2017 and December 2018 to support and inform the appraisal of options for how specialised neonatal services in Bristol could be reconfigured differently to ensure all babies born in Bristol are delivered in the right place at the right time with the right level of staffing in a service that better meets the requirements of the national service specification for specialised neonatal services. The report describes why this work was carried out, how specialised neonatal services in Bristol currently operate, and how a programme of engagement involving patient, public, clinical and commissioning experts collectively shaped option development and the option appraisal (shortlisting) process.

Continuously guided and informed by the views, concerns and suggestions that various stakeholders made throughout the project, the option (3) to bring the services of the two units into a single functioning unit across the two sites and to concentrate the babies requiring level 3 intensive care onto the St Michael's site with families still able to access level 1 and level 2 neonatal services at Southmead scored most highly across all of the evaluation domains and has subsequently been subjected to a more detailed impact assessment via the development of an outline business case proposal.

The project team would like to thank all those who shared their views, concerns and ideas throughout this project. We are committed to keeping people informed of developments as this work progresses on each of our websites and keen to continue working with local people and staff to codesign, for example, any new family accommodation that will need to be built. If you are interested in taking part in this work, please contact Amanda.Saunders2@UHBristol.nhs.uk

N.B. The engagement programme summarised in this report only relates to very specialised neonatal services for the sickest and/or most premature babies in Bristol. It does not relate to general maternity services.

2. Background

Every year over 11,000 women have a baby in Bristol. The vast majority can choose whether to have their baby at home or in hospital under the care of a midwife. However, women with pregnancy-related health concerns have less choice as they need to be cared for by a consultant in hospital.

A small number of babies, usually around 10%, will need extra, more specialised care in hospital each year. Special care for ill or premature babies should be provided by specialised 'neonatal services' in acute hospitals in line with a national service specification.

The service specification describes what is required in each of three levels of neonatal unit to ensure that people receive the same level and quality of service regardless of where they have their baby delivered in England. Only a relatively small number of babies need this kind of specialised support.

Each level of specialised neonatal care requires increasing speciality (described below).

Level One – Special Care Unit (SCU)

SCU is for babies who need short-term care such as continuous monitoring of their breathing and heart rate, treatment for jaundice and for those who are convalescing from other care. Generally premature babies who are over 32 weeks gestation will be cared for in a SCU.

Level Two – Local Neonatal Unit (LNU)

LNU is for babies who have a higher dependency and need short-term intensive care. Generally premature babies who are over 27 weeks gestation will be cared for in a Local Neonatal Unit.

Level Three – Neonatal Intensive Care Unit (NICU)

NICU provides very specialist intensive treatment for the very smallest and sickest babies. Generally, this is for babies needing respiratory support weighing less than 1,000g, born at less than 28 weeks gestation and needing significant continuous positive airway pressure. Babies with severe respiratory disease who also require surgery may need this level of care too.

What happens now?

All three of the above levels of specialised neonatal care are currently provided in neonatal units at Southmead and St Michael's (University Hospital Bristol Trust) hospitals in Bristol. The neonatal unit at Southmead cares for around 770 babies each year and the neonatal unit at St Michael's cares for around 750 babies each year.

Why do things need to change?

Neonatal services at both sites provide excellent care to the large number of babies they care for and have some of the lowest mortality figures in the UK (MBRRACE 2015). Nevertheless, in line with recommendations made following national and clinical reviews, local clinical experts at both hospitals agree that changes need to be made now to ensure they can continue to deliver a safe, resilient and sustainable service for years to come.

This is because neither service is currently able to meet the staffing requirements set out in the national service specification, which makes both services less resilient and less able to be flexible when responding to staffing pressures or sudden increases in demand. Moreover, in attempting to meet the national service specification's staffing requirements for two separate NICUs located only four miles apart, both Trusts have to compete to recruit an already limited, highly specialised workforce. Consequently, attempts to achieve staffing targets at both sites have been repeatedly unsuccessful.

In addition, there is strong clinical agreement that babies needing neonatal intensive care (level 3) receive better quality care and have better clinical outcomes when they are treated by specialists who deal with a higher number of patients (please see Research section). Indeed, recent British Association of Perinatal Medicine (BAPM) research found that extremely preterm babies (below 27 weeks gestation) who are cared for in neonatal units that treat greater numbers of patients have approximately twice the survival rates as babies cared for in units that treat fewer patients. However, spreading activity across two sites makes it more difficult for either Bristol NICU to receive and treat the number of babies needed to maintain the highly specialist skills that are associated with these higher survival rates.

We also know that babies born at less than 32 weeks will often need other paediatric specialist treatment such as cardiac surgery. However, since paediatric services were centralised at the Bristol Royal Hospital for Children some years ago, Southmead hospital has had no paediatric surgery, cardiology, radiology and

neonatal trained pharmacy on site, and has limited access to paediatric physiotherapy, speech and language therapy and dietetics. As a result, 35-40% of NICU babies born at Southmead have to be transferred to St Michael's at some point after they have been born in a specially equipped and staffed neonatal ambulance to receive care from paediatric specialists that are unavailable at Southmead. Moving from one hospital to another shortly after birth at such a vulnerable time in a small baby's life can be challenging both for the baby and their family and poses a level of clinical risk.

To address these concerns specialised commissioners and a project team from the two NICU units in Bristol have listened to a range of clinical experts, patient representatives and their families to develop and appraise options for how neonatal services in Bristol could be arranged differently to ensure all babies born in Bristol are delivered in the right place at the right time with the right level of staffing in a service that meets the following criteria that were set by specialised commissioners.

- The neonatal service must operate as a single managed service, with a clear line of day to day clinical and operational accountability;
- There is a strong preference for the entire service to be based on a single site where this is deliverable within logistical and operational constraints;
- If the service is based across more than one site, the level 3 (NICU) element of the service must be delivered entirely on one site, with a level 1 or level 2 service delivered on the second site.
- The level 3 (NICU) element of the service must have direct and seamless access to the full range of paediatric co-dependencies and specialist clinical support.

3. Option Development

A Project Board and a Project Working Group were established to oversee and develop a range of options for how neonatal services could meet the following objectives.

- Minimise transfers of small high-risk babies
- Improve access for all neonatal babies to paediatric specialities
- Improve access for all neonatal babies to paediatric support services (in other words, paediatric radiology, paediatric pharmacy, speech and language therapy, physiotherapy, dietetics)
- Support provision of a safe and sustainable neonatal workforce
- Have minimal impact on the existing maternity provision at each hospital

A long list of clinical options was initially developed by the clinical teams at each hospital and members of the project board (please see Table 1). Each option was then considered in terms of feasibility and deliverability and options 1, 3 and 4 were shortlisted for wider targeted engagement with staff and relevant patient and family support groups.

Table 1. Long list to short list of clinical model options

Long of options	Shortlisting Criteria	Result	Short list of options
1. Do Nothing	• Delivers Project Objectives • Feasibility & deliverability	Standard to include in short list	**1.** Do Nothing
2. Minimum change/enhance existing service at Southmead (NBT)		Not shortlisted as does not achieve project objective to minimise transfers of small high risks babies	
3. Neonatal Intensive Care (level 3) at St Michael's (UH Bristol) and Local Neonatal Unit (Level 2) at NBT		Shortlisted	**3**. Neonatal Intensive Care (level 3) at UH Bristol and Local Neonatal Unit (Level 2) at NBT
4. Neonatal Intensive Care (level 3) at UH Bristol and Special Care Unit with short term non-invasive ventilation at NBT		Shortlisted	**4.** Neonatal Intensive Care (level 3) at UH Bristol and Special Care Unit (Level 1) with short term non-invasive ventilation at NBT
5. Centralised neonatal unit on one site		Not shortlisted as currently not feasible or deliverable	
6. Option 4 with maternity workload redistribution		Not shortlisted as significant impact on maternity services	

1. Do nothing option

St Michael's and Southmead to both remain level 3 (Neonatal Intensive Care) Units.

3. LNU option

St Michael's to remain a level 3 (Neonatal Intensive Care) Unit, with Southmead to be re-designated as a level 2 (Local Neonatal) Unit

4. SCU option

St Michael's to remain a level 3 (Neonatal Intensive Care) Unit, with Southmead to be re-designated as a level 1 (Special Care) Unit

For either of the above options that require services to be changed (Options 3 and 4), local stakeholders were given the following information before being asked for their views.

Information given to stakeholders:

Making St Michael's the main NICU in Bristol would mean that far fewer very small high-risk babies would have to transfer after birth from Southmead to St Michael's for specialist paediatric and surgical care and they would be admitted to a hospital with staff with the right kind of expertise including paediatric specialists, to care for them.

What would this mean for mothers to be?

Doctors and midwives agree that the safest way to transport a baby that is likely to need higher levels of care is in the mother's womb whilst she is still pregnant. Whilst the majority of women (98%) due to give birth would see no change at all, there would be a small number of women who would move to St Michael's to give birth.

In line with the national practice for Local Neonatal Units (LNU) and Special Care Baby Units (SCU), the Southmead unit would care for babies born at either 27 weeks or more gestation if it's a LNU or 32 weeks or more gestation if it's a SCU.

This would mean that the group of mothers booked to deliver at Southmead and who go into early labour at less than 27 weeks in the LNU option, or less than 32 weeks in the SCU option, would be moved to St Michael's to give birth. Based on the numbers of relevant deliveries in previous years, this would mean that around 48 mothers (if Southmead was a LNU) or 96 mothers (if Southmead were a SCU) would move to St Michael's to deliver their baby if they were likely to need specialist intensive care and possibly surgery when they are born.

For both options, there may also be a number of babies born at greater than 32 weeks who unexpectedly need specialist intensive care or surgery and will need to be moved to St Michael's for care after birth.

Wherever possible and clinically appropriate and safe the aim is to keep mothers and babies together. Mothers still needing care after delivery, whose baby is born at Southmead and has moved for care at St Michael's, will also move to St Michael's

for their care. Accommodation is offered to parents close to, or on the neonatal unit at both St Michael's and Southmead.

What would this mean for babies who need intensive care who have already been born?

Sometimes a baby may unexpectedly need specialist care after it has been born. Doctors will decide the best place for the baby to be cared for dependent on his or her needs as they do currently. Babies born after 27 weeks in Southmead (if it is a LNU) or after 32 weeks (if it is a SCU) would generally be cared for in Southmead. Babies that were booked for delivery at Southmead but who have been cared for at St Michael's that need continuing care would be transferred back to Southmead to continue their care as soon as it is safe to do so. All transfers of babies and mothers between both hospitals would be with a well-established service that is staffed by highly skilled doctors and nurses who are experts in the transfer of NICU patients.

4. Public and Patient Feedback

To ensure the options appraisal was informed by the views and ideas of local people in ways that are proportionate to the proposed change and targeted at the people most likely to be impacted by it, members of support groups that were already involved and engaged in either maternity or neonatal services were asked to attend a public meeting and/or complete a questionnaire. This included Maternity Voices members, South West Neonatal Operational Delivery Network Parent Representatives, and Bliss volunteers.

An information leaflet summarising the background; case for change; expected impact on mothers and babies of each option and the answers to a series of questions we anticipated local people may have was sent out in advance (patient information leaflet available upon request) and available at each unit. Eleven people attended the public meeting and others who were unable to attend gave their feedback virtually.

At the public meeting Paul Mannix, Clinical Lead for this project and Clinical Director for Women and Children's Division at Southmead hospital, described the background and aims of the project to review and improve specialised neonatal services in Bristol, the options under consideration, and the key impacts anticipated for mothers to be, babies and mothers. He also highlighted how their feedback would be used to inform the evaluation of the shortlist of options to identify a preferred option.

The presentation was followed by an open question and answer session and focus group discussions that aimed to explore people's answers to the following questions:

- Any points that need clarifying/further questions you have?
- What do you think are the positives about each of the options?
- What would your concerns be about each of the options?
- What have we not thought about?

What people said

Feedback received both from the engagement session and virtually is outlined (in no particular order) below.

People largely agreed that a change needs to happen to reduce the transfers of small high risks babies. Initially, some people were opposed to any change, especially changing the level of the Southmead unit, but once they learned about the reasons for the case for change and the benefits for mothers and babies, they understood why the change was being considered and were supportive.

Parking, facilities for parents, access to food were all raised as important factors for families that need to be taken into consideration when thinking about concentrating NICU services at St Michael's.

> *The project team have modelled the parental accommodation that would be needed for the preferred option, details of which are included in the outline business case (available on request).*

Communication: The need for clear and consistent communication throughout the maternity and neonatal pathway was emphasised both as an everyday part of quality delivery as well as something that would need to be carefully considered when informing people about any service change. Mothers would want to know what was happening and why so that they and their families could prepare properly.

Communications and engagement colleagues from both hospitals and NHS England are currently working on this with a view to producing an information leaflet to help people navigate the system and know what to expect. In addition, the South West Neonatal Network and NICU Foundation have just won a British Association of Perinatal Medicine (BAPM) and Evidence Based International Neonatology (EBNEO) award for an animation that also aims to alleviate concerns of mothers-to-be and provide information to new parents of babies cared for in neonatal units about the facilities and support available to them, the staff they will meet throughout their journey and advice about the benefits of interacting with and holding their baby. You can watch the animation here.

Bereavement and Palliative care: People suggested that bereavement and palliative care at St. Michaels would need to be enhanced and expanded to cope with the greater numbers of very sick babies.

> *Bereavement and palliative care services are available at both sites. As we change the way that the teams at each hospital work together we will review the distribution of bereavement and palliative care services that currently exist and respond as needed.*

Perinatal mental health was raised as a general current concern and discussed at length as people stressed the importance of ensuring mothers' physical and mental health needs are provided for as well as babies.

> *Although perinatal mental health services were beyond the scope of this NICU review, NHS England and Improvement's (NHSE/I) SW specialised commissioning team have listened to these concerns and are working to expand the service by commissioning an additional seven perinatal beds in the South West by April 2021.*

Capacity: Concerns were raised about St. Michaels' ability to cope with any additional workload when babies and mothers are already being sent out of Bristol due to occasional lack of capacity at St Michael's.

> *The St. Michaels unit will be expanded to accommodate the additional workload, with improved cot occupancy to increase capacity. If Option 3 is endorsed by local authority overview and scrutiny colleagues then we are committed to increase capacity at St Michaels to be a 41 bed unit (from a 31 cot unit). Southmead would retain 26 cots which would achieve an average daily occupancy of 90% (cot modelling available on request). However, we cannot rule out the possibility that there may be (albeit fewer) times when mothers and babies are sent out of area as happens currently even if the number of cots is increased.*

Continuity of care: Some people stressed the need for continuity of care for women and babies who need to be transferred between different services.

> *Having the same clinical guidelines, governance structures and policies implemented across both units will support continuity of care for babies by enabling both teams to collectively plan and provide care as one team. Further work is being carried out with the local maternity system to look at how continuity of care for mothers can also be enhanced.*

Choice: People asked whether women would feel that they still had choice in terms of place to birth, and whether they would feel supported in their choice if possible.

> *The recommended changes do not impact on the choice of most mothers as it is only the very sickest babies that would need to go to St Michael's, where many babies are already being transferred shortly after birth. As such these cases are treated as an emergency where choice is not applicable. Nevertheless, choice was one of the criteria the appraisal team considered when scoring options and the option that was given the highest score for 'choice' because it enables 98% of mothers to still be able to deliver in their*

booking hospital of choice was Option 3 as Southmead will continue to provide maternity services and Level 1 and 2 neonatal unit care as currently.

Transitional Care: Concerns were raised about the provision of transitional care and "rooming in" and at times the poor experience of mothers coming from neonatal units into transitional care. It was hoped that perhaps the proposed changes for neonatal service may be an opportunity to iron out some of the existing issues with transitional care.

In line with the recommendations of the national review of neonatal services (soon to be published) specialised commissioners will be looking at transitional care models across all providers to identify best practice so that learning can be shared across all neonatal units.

Parent Accommodation provision: people were concerned that accommodation for parents would need to be increased if the proposal to deliver all NICU babies at St Michael's was actioned.

Provisional plans for expansion at St. Michaels include the recommended increased provision of parental accommodation, including rooms for parents to stay in on the unit, for each of the options (available on request) to ensure there is sufficient accommodation to cope with the increase in activity at St Michaels.

Neonatal /parents timeline: Parent representatives that attended the event agreed the planned development of a roadmap for parents may be a useful resource in the future to address some of the confusion parents can feel and wanted to know when this would be available.

Please see our answer under the communication section above.

Clinical reputations: Some people were concerned that mortality numbers may increase at St Michael's relative to current figures if its NICU starts receiving greater numbers of the very sickest babies that have a low chance of survival even with the best intervention. Hence, people stressed the need for steps to protect the unit's reputation.

We asked the options appraisal team to specifically consider each of the options in terms of their ability to protect and enhance the reputation of both services. Of all the options that were considered the recommended model (Option 3) scored highest for clinical reputation (please see Table 2 below).

Table 2

Framework for decision making	No.	Criteria	Option 1 "Do Nothing"	Option 3 NIC/LNU	Option 4 NIC/SCU
4. Reputational	4a	The option protects and offers opportunity to enhance the reputation of neonatal services delivered by both organisations.	569	942	796
		Total	**569**	**942**	**796**

"De-skilling" of staff, governance issues: Some asked whether the change in service provision at Southmead would result in de-skilling of staff there and whether there would be any governance issues with staff working across two hospitals.

The recommended changes would give clinical staff at both hospitals access to a wider range of cases by working on a shared rota and to a single set of governance and clinical protocols. This will provide increased opportunities to share learning and expertise across both teams and help staff develop and maintain their skills at the highest level.

5. Staff Feedback

Throughout the lifetime of the project there have also been a number of staff engagement sessions held in both hospitals both before and after the public and patient engagement described above. These staff engagement sessions, run by the clinical lead for the project and/or the NICU Project Manager, have included neonatal nurses, neonatal staff, midwifery staff, neonatal consultants and obstetric consultants.

After providing staff with updates on progress with the project to date, staff have been asked to raise:

1. Any concerns they have
2. Any positive outcomes/opportunities that making a change might bring

Key issues raised by staff were consistent with the feedback and concerns that people shared during the public and patient engagement already described above. Additional benefits of reconfiguring neonatal services in Bristol that local clinical experts identified were:

- Improve clinical quality of care by reducing transfers of very sick small high-risk babies across the city.
- Excellence and good clinical outcomes at both Southmead and St. Michaels so bringing both units closer together will offer opportunities to share best practice across both sites.
- Highly trained and skilled staff on both sites, presents opportunities to share learning, to increase exposure of staff to both medical and surgical neonatology to improve the service overall.
- Larger pool of both medical and nursing staff to pull from.
- Could help improve recruitment and retention of both medical and nursing staff across both units.
- Common sense to have intensive care at St Michael's who manage almost all the paediatric services.
- Could improve continuity of care for families if the same clinical guidelines and policies were implemented across both units. This could be further improved if both units had the same patient administration system.
- Improved educational and research opportunities across both units.
- Larger service could improve support for staff and benefit the babies.
- Positive for babies in Bristol as may mean fewer transfers out of area if there is increased capacity/occupancy across the units.
- Co-ordinated cross-city working, improved cohesiveness between both units.

- Focusing on what's best for the baby, placing the baby at the center of designing the potential future neonatal service- aiming for a service that is both safe and sustainable has to be good.

6. Scoring Process

All of the stakeholder feedback was included in the options appraisal supporting information pack that was given to the scoring team to ensure any recommended option that emerged was influenced by local people's views.

Across all evaluation criteria, Option 3, that level 3 specialised support should be concentrated at St Michael's and that the Southmead facility should be re-designated to provide care as a level 2 unit emerged as the preferred option (please see Table 3). This balances clinical improvements against the need to maintain access and choice of birthing location for all but the most premature births and enables level 3 babies to be transferred back to Southmead for step down care as soon as they are well enough.

Table 3 Option Appraisal Results

Framework for decision making	Option 1 "Do Nothing"	Option 3 NIC/LNU	Option 4 NIC/SCU
1. Strategic Alignment	2067	2899	2310
2. Operational	6754	10,458	9,732
3. Clinical and quality	3321	4531	3795
4. Reputational	569	942	796
Total	**12711**	**18830**	**16633**

7. The impact of Option 3

The distance between Southmead (NBT) and St Michael's (UHB) is approximately four miles, making it closer to some patients and slightly further for others. NHS England and local clinical experts believe the clinical benefits to babies and mothers far outweigh any potential negative impact of any additional mileage. Moreover, a free hospital shuttle bus operates between hospitals in Bristol and free accommodation for families at both St Michael's and Southmead that is being increased to ensure there is sufficient capacity to meet the anticipated increase in demand for family accommodation.

Families will still be able to access level 1 and level 2 neonatal services at Southmead to enable babies to receive as much of their care as possible in the hospital that mothers originally chose as their place of delivery. NHS England and local clinical experts believe these considerations collectively mitigate and minimise the potential negative impact on families who would have otherwise chosen to give birth at Southmead.

Option 3 will have a slight impact on patient choice, as mothers who are booked to deliver at Southmead but who go into labour before 27 weeks would instead be taken straight to St Michaels. In the new model of care, with a Level 3 service at St. Michael's and a LNU at Southmead, we would expect based on historical data that less than 30 women a year from Bristol, North Somerset and South Gloucestershire are would deliver at St. Michael's instead of Southmead, and approximately another 18 women from outside of Bristol, North Somerset and South Gloucestershire.

Under current arrangements, 40% of babies born at Southmead before 32 weeks are subsequently transferred to St Michaels for paediatric or surgical interventions and so a significant proportion of the women who would be affected by the proposed change will have earlier transfer to the most appropriate care setting for their babies, thereby removing the clinical risk to both mother and child that is incurred when having to move them.

Local clinical consensus is that the integration of the Southmead and St Michaels specialised neonatal services in this way will create a centre of excellence for neonatal care in Bristol that is more resilient and sustainable.

There will be more clinicians with the right specialist skills (including cardiology and surgical specialties) available to treat NICU babies through this integrated service, with multidisciplinary teams working across both hospitals caring for sufficient numbers of babies to maintain their skills at the levels needed to deliver the safest, highest quality neonatal services 24/7 for years to come (in accordance with the recommendations of the British Association of Perinatal Medicine and South West Neonatal Operational Delivery Network). This should also support research and development activities at each hospital, again increasing the skills and knowledge of both teams.

Funding additional cots will also reduce the number of mothers who need to be sent out of the area to deliver their baby. Any reduction in transfers would improve the patient and family experience, staff morale as well of the financial benefits to the local health economy of retaining activity in Bristol.

To summarise, we expect the proposed model of care to have the following benefits.

Improved clinical quality outcomes and patient safety

- It places the most at risk small vulnerable babies at St Michael's with the paediatric specialists co-located, ensuring that they are in the right place at the right time with the right staff to care for them
- It minimises ex-utero transfers of these small high-risk babies
- It is supported by the research evidence that has shown improved mortality and morbidity in NICU's that care for higher numbers of babies
- A key component of any partnership agreement between the Trusts would be a firm commitment from St Michael's to ensure systems are in place to improve referral pathways from Southmead to St Michael's to paediatric specialists and improve access for babies to paediatric support services
- It improves patient safety by integrating the units and agreeing clinical guidelines, rotation of staff and maintenance of neonatal skills across sites, professional advice and shared learning

Improved long term sustainability of the service

Integrating both units would significantly improve the long-term sustainability of the service;

- Southmead NICU would no longer be a standalone unit, instead it would be bolstered and supported via integration with St Michael's, with better access to paediatric specialists and paediatric support services, and together provide excellent, high quality tertiary neonatal care across the region
- Integration of medical staffing would enable greater flexibility of medical workforce to cover rotas across both sites due to a larger medical staff pool
- Improved recruitment and retention for nursing and medical staff**;**
- Integration of the units provides more scope for teaching and training, better exposure to a wider range of neonatal problems. This breadth of exposure would be more attractive to potential incoming staff
- Will allow the establishment of an integrated neonatal service with increased research capabilities which in turn will help to attract staff for training and fellowships

Additional benefits also include:

- Improved patient and family experience. It is recognised that the transfer of newborns at such an early vulnerable stage of their life often causes both the new-born and their family stress and concern. Reducing these transfers will help improve families' experience of neonatal care in Bristol
- Minimal impact on current maternity services as 98% of women will still deliver in their maternity unit of choice

- It meets NHSE/I's specialized commissioning intentions for all level 3 neonatal intensive care to be provided on one site and it steps towards the intentions for a single managed neonatal service in Bristol

8. Next steps

Before the recommended changes can proceed the proposal to concentrate NICU at St Michael's must be supported by the organisations that need to commit the resources needed to make the proposal a reality (University Hospitals Bristol, North Bristol Trust and NHSE England). Consequently, an outline business case has been developed with stakeholders and approved by the project board and specialised commissioning's oversight group.

If endorsed by members of the Bristol, North Somerset and South Gloucestershire Joint Overview and Scrutiny Committee (at the end of October 2019) both hospital Trusts and specialised commissioners will then be able to complete the detailed work needed to develop the final proposal for a shared management and governance model, with detailed workforce and estates planning etc. in the form of a full business case, which can then go for final approval to Trust and NHSE/I boards to commit the necessary resources by Spring 2020.

In line with recommendations from the national review of neonatal services to concentrate NICU activity in a single centre in Bristol by 2022, we anticipate being able to start delivering the preferred model described above in mid to late 2021 once the additional family accommodation etc is ready. With that in mind, we would like to continue working with local people and staff to co-design any new facilities. Please email Amanda.Saunders2@UHBristol.nhs.uk if you are interested in taking part.

References

Marlow N, Bennett C, Draper ES, Hennessy EM, Morgan AS, Costeloe KL. Perinatal outcomes for extremely preterm babies in relation to place of birth in England: The EPICure 2 study. *Arch Dis Child Fetal Neonatal Ed.* 2014 99(3): F181-8 doi: 10.1136/archdischild-2013-305555

Watson S, Arulampalam W, Petrou S, Marlow N, Morgan AS, Draper ES, Santhakumaran S, Modi N; Neonatal Data Analysis Unit and the NESCOP Group. The effects of designation and volume of neonatal care on mortality and morbidity outcomes of very preterm infants in England: Retrospective population-based cohort study. BMJ Open (in press) 2014

Watson SI, Arulampalam W, Petrou S, Marlow N, Morgan AS, Draper ES, Modi N; Neonatal Data Analysis Unit (NDAU) and the Neonatal Economic, Staffing, and Clinical Outcomes Project (NESCOP) Group. The effects of a one-to-one nurse-to-patient ratio on the mortality rate in neonatal intensive care: a retrospective, longitudinal, population-based study. Arch Dis Child Fetal Neonatal Ed. 2016 Feb 9. pii: fetalneonatal-2015-309435. doi: 10.1136/archdischild-2015-309435.

Fenton AC, Ainsworth SB, Sturgiss SN. Population-based outcomes after antenatal transfer. Paediatric & Perinatal Epidemiology 2002; 16: 278-285
Mohammed, M. A., Aly, H. Transport of premature infants is associated with increased risk for intraventricular haemorrhage. Archives of Disease in Children – Fetal and Neonatal Edition 2010:95:F403-F407

Almadhoob, A., Ohlsson, A. 2015. Sound reduction management in the neonatal intensive care unit for preterm or very low birthweight infants. Cochrane Database of Systematic Reviews.

Harrison, C., McKechnie, L. 2011. How comfortable is neonatal transport? Acta Paediatrica. Feb:101(2):143-7.

BLISS. 2016. BLISS Reports and Publications. [ONLINE] Available at: https://s3.eu-west-2.amazonaws.com/files.bliss.org.uk/images/Transfers-of-premature-and-sick-babies.pdf?mtime=20180404114256. [Accessed 5 November 2018].

Mulaney, D. M., Edwards, W. H., DeGrazia, M. 2014. Family Centered Care During Acute Neonatal Transport. Advances in Neonatal Care. Vol. 14 (5S) p S16-S23

Appendix A – Glossary

BLISS	A charity that supports families with babies born premature or sick
Continuous positive airway pressure	Continuous positive airway pressure is a form of positive airway pressure ventilator, which applies mild air pressure on a continuous basis to keep the airways continuously open in people who are not able to breathe spontaneously on their own.
Dietetics	Applying the science of nutrition to regulate food intake and provide advice on healthy diets.
Jaundice	Jaundice is when your skin and the whites of your eyes turn yellow. It is common in new born babies but in some cases requires intervention with investigations and treatment.
Maternity Voices	A forum to engage with patient populations in respect of changes to maternity services in Bristol, North Somerset and South Gloucestershire.
NBT	North Bristol Trust – neonatal unit at Southmead often referred to as NBT
Operational Delivery Network	ODNs coordinate patient pathways between providers over a wide area to ensure access to specialist resources and expertise. South West Operational Delivery Network (for neonatal care) is made up of neonatal services at Gloucester, Swindon, Bristol, Bath, Taunton, Yeovil (Northern Sector) and Barnstaple, Torbay, Exeter, Plymouth and Truro (Southern Sector).
Tertiary services	The NHS is divided into primary care, secondary care, and tertiary care. Primary care is often the first point of contact for people in need of healthcare, and may be provided by professionals such as GPs, dentists and pharmacists.

	Secondary care, which is sometimes referred to as 'hospital and community care', can either be planned (elective) care such as a cataract operation, or urgent and emergency care such as treatment for a fracture. Tertiary care refers to highly specialised treatment such as neurosurgery, transplants and includes specialised neonatal services such as NICU. As of March 2017 there are 233 NHS providers of secondary and tertiary care.
UHB	University Hospitals Bristol NHS Trust – neonatal unit often called St. Michael's

Appendix B – Professional Stakeholders involved in option development and appraisal

- ✓ Clinical Director/Chair for Women and Children's Division at each Trust
- ✓ Neonatal Clinical Director/Lead at each Trust
- ✓ Neonatal Consultant Group from each Trust- combined score
- ✓ Neonatal Matron and Nurse staff member from each Trust
- ✓ Obstetric Consultant Clinical Director/Lead from each Trust
- ✓ Obstetric Consultant Representation from each Trust
- ✓ Head of Nursing & Midwifery from each Trust
- ✓ Midwife from each Trust
- ✓ Managerial Lead from each Trust
- ✓ South West Neonatal Operational Delivery Network Network Manager/Clinical Lead (also representing Specialist Commissioners)
- ✓ Local Maternity System Clinical Lead/Commissioner Lead