

National Neonatal Network

ANNUAL REPORT 2020/21

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Executive Summary

After what has been a unique and testing year for the NHS and the population of Scotland, I am pleased to share the second annual report for the National Neonatal Network. The last twelve months have been challenging for neonatal services and families experiencing neonatal care, however by working collaboratively much has been achieved. The weekly then fortnightly national Covid calls allowed the community to make decisions together throughout the pandemic, whilst being kept updated on Scottish Government policy and updates from our professional bodies.

Speciality-specific fora have been established to ensure two way sharing of information to directly shape the work plan. Plans to establish a patient advisory group to ensure the lived experience of neonatal care is central to the work of the network is in the forefront of our objectives for 2021/2022.

Notable achievements in the last year have been the establishment of the Repatriation Working Group and the collaboration between units to support families moving between units for elements of their care. The Neonatal community has embraced the new technology the response to Covid necessitated; virtual ward rounds and virtual tours of units are now taking place to support families and staff across the Network. The Escalation and Capacity Group have agreed a consistent process for declaring unit closure and drafted a tool to support colleagues in making these decisions, developments that will be fundamental in maintaining capacity and efficiency of patient flow across the Network.

Since the publication of the first Neonatal Network annual report last year, The National Maternity Network has now also been established and we are beginning to plan perinatal themed shared learning events and working groups due to take place in 2021/22, reinforcing the necessity to work in this perinatal manner.

As we hopefully approach brighter and safer times across Scotland I look forward to the continuing outputs from the Neonatal Network and we hope a face-to-face meeting of the Scottish Perinatal Network will be possible soon.

Lesley Jackson

National Clinical Lead

1. The Strategic and Service Context

1.1 Strategic Context

The Scottish Government published a review of maternity and neonatal services in Scotland, *The Best Start*¹, in 2017. This details a five-year forward plan for the improvement of maternity and neonatal services in Scotland.

As part of the new model of maternity and neonatal service provision in Scotland, *The Best Start* recommended the creation of two national networks for maternity and neonatal care:

“[Recommendation] 73: A single Maternity Network Scotland should be created to promote sharing of experience and expertise and to create regional or national protocols, for example to manage the most complex conditions at a national level.

[Recommendation] 74: There should be a single Neonatal Managed Clinical Network for Scotland with the new model to ensure integrated working across NHS Board boundaries, including input from service management and clinical staff. The maternity and neonatal networks should come together formally on at least an annual basis to promote integrated services.”



This would involve implementation of a national maternity network, which did not exist previously at local, regional or national level in Scotland. A single national neonatal network would replace three Managed Clinical Networks (MCNs), which did exist previously for the North, West and South East & Tayside regions.

The Best Start recommendations to establish national maternity and neonatal networks were implemented through national commissioning processes hosted by NHS National Services Scotland. The National Specialist Services Committee (NSSC) approved the commissioning of the National Neonatal Network (NNN) and the National Maternity Network (NMN) as national strategic networks in April and June 2019, respectively.

1.2. National Strategic Networks

Within NHS Scotland, networks are used to bring together stakeholders across traditional professional and geographical boundaries. National strategic networks work across geographical and organisational boundaries to support a 'Once for Scotland' approach to the planning, design and delivery of an integrated, holistic, person-centred care pathway across the health and social care system, co-produced with all stakeholder groups.

¹ Available at: <https://www.gov.scot/publications/best-start-five-year-forward-plan-maternity-neonatal-care-scotland/>.

Both the NMN and NNN were commissioned on the basis that their model of delivery would follow the established model for national strategic networks. This model builds on best practice for MCNs² and includes five core elements:

- a) An effective structure that is organised, resourced and governed to deliver network objectives, as agreed with Scottish Government, NHS Board Chief Executives and other key stakeholders;
- b) A recognisable identity/platform on which to build the network;
- c) An agreed mandate, co-produced with network stakeholders;
- d) A focus on whole pathways of care;
- e) The ability to effect strategic change across those pathways of care.

While the NMN and NNN have been commissioned as two separate national strategic networks, *The Best Start* and the respective NSSC applications recognise the interdependencies and synergies between both networks, suggesting close collaboration and joined-up management, oversight and governance. The NMN and NNN have therefore been developed together under the umbrella of the Scottish Perinatal Network (SPN).

1.3 Service Delivery Context

Neonatal Care refers to the specialist health services provided to babies born premature or sick. The word 'neonatal' means newborn. The neonatal period usually covers the first 28 days of life.

In Scotland neonatal care is provided by a total of 15 neonatal units, comprising local neonatal units, special care units, and neonatal intensive care units (NICUs). Figure 1 shows the locations of all neonatal units.



Figure 1: Map of Neonatal Units in Scotland.

Neonatal services deliver special, high-dependency, intensive or surgical care to newborn babies. Approximately 11% of live births each year require some form of neonatal care. The table below gives a

² See CEL (2012) 29, available at: http://www.sehd.scot.nhs.uk/mels/CEL2012_29.pdf.

breakdown of babies in neonatal care, by level of care, according to the Scottish Birth Record data for 2010-2019³.

Year	Total	Intensive Care	High Dependency	Special Care	Transitional Care	Neonatal Care - Level Unknown	Total Extra Care
2010	55,704	910	538	4,596	218	-	6,262
2011	57,078	936	625	3,992	261	-	5,814
2012	58,907	1,192	772	4,762	235	-	6,961
2013	57,476	1,213	705	4,525	229	-	6,672
2014	56,214	1,394	592	3,945	237	-	6,168
2015	56,190	1,555	703	3,651	260	-	6,169
2016	55,258	1,543	937	3,944	300	-	6,724
2017	54,261	1,447	998	3,620	283	82	6,430
2018	52,496	1,389	1,014	3,357	127	142	6,029
2019	51,164	1,313	1,106	3,130	44	122	5,715

Figure 1: Live births receiving neonatal care, by level of care, 2010-2019 (year to 31 March). For more information on this data please see: <https://beta.isdscotland.org/find-publications-and-data/population-health/births-and-maternity/births-in-scottish-hospitals/>

2. Network Governance and Mandate

2.1. Network Structure and Governance

Network governance is shared across the SPN. In line with best practice for national strategic networks, the proposed SPN governance structure includes four elements:

- 1) SPN Oversight Board
- 2) NMN and NNN Core Steering Groups
- 3) Working groups/sub-groups
- 4) Network Programme Team

It has been proposed that for the duration of the Best Start Implementation Programme the SPN Oversight Board function will be provided by the Best Start Implementation Programme Board (IPB), in recognition of the significant synergies and overlap in membership for both groups. However, due to the impact of the Covid-19 pandemic, it was not possible to finalise this aspect of the SPN governance structure during 2020/21. A first meeting of the SPN Oversight Board is scheduled for 14 May 2021.

The diagram below outlines the SPN governance structure and lines of accountability:

³ See: https://beta.isdscotland.org/media/6434/mat_bb_table9.xlsx Please note that Scottish Birth Record data does not include NHS Borders.

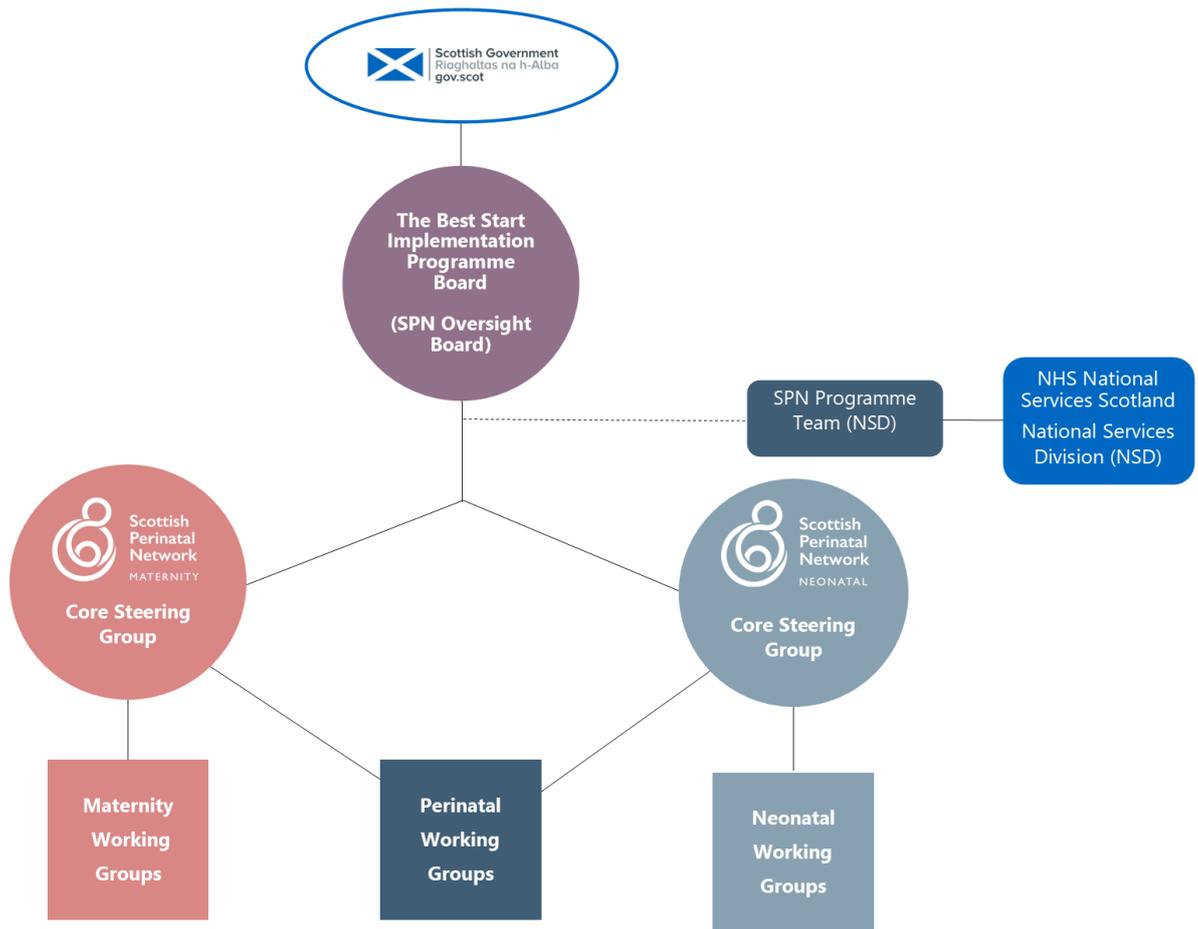


Figure 3: SPN governance diagram

The first meeting of the National Neonatal Core Steering Group took place in December 2020. This was well attended from a wide range of representatives across Scotland (details in Appendix 1) and provided an opportunity for the NNN team to provide an update on the work to date in the Network. A draft work plan was presented and agreed by the group at this meeting.

The group met for the second time in March 2021 where further updates were given on progress relating to the work plan and the Terms of Reference were agreed. As work progresses in the various working groups, the Core Steering Group will play a pivotal role in ratifying products produced and overseeing the Network work programme under the guidance of the SPN Oversight Board.

2.2 Network Programme Team

Recruitment to the SPN programme team at NSS was completed in 2020/21. The Programme Team comprises:

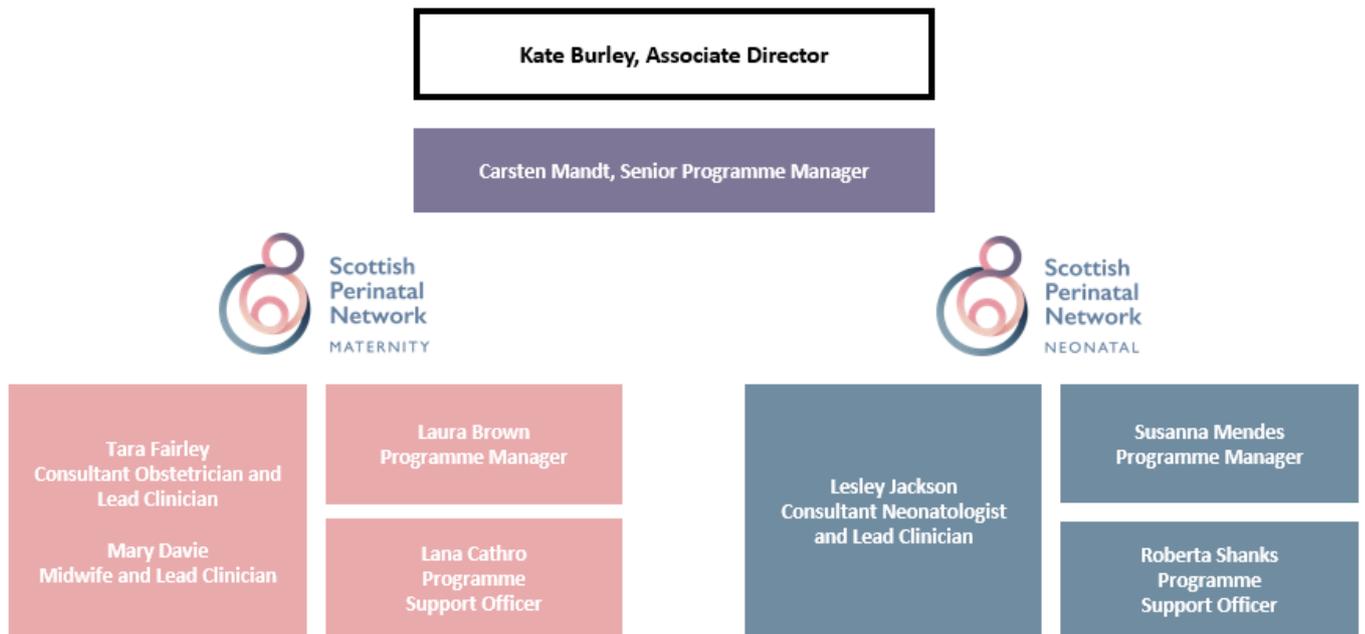


Figure 4: Scottish Perinatal Network Programme Team

2.3 Network Mandate

2.3.1 SPN Objectives

As part of the SPN, the NNN will deliver added value to its stakeholders across the SPN's core objectives. These objectives are:

- To provide a forum to lead collaborative and collective development and improvement of services and sharing of expertise in neonatal and maternity services, across all key stakeholders;
- To work across geographical and organisational boundaries to support a 'Once for Scotland' approach to improvement activity in neonatal and maternity services;
- To deliver on specific projects linked to recommendations contained within the Best Start, as commissioned by the Best Start Programme Board and/or Scottish Government;
- To create nationally consistent protocols, guidance and care pathways across maternity and neonatal services;
- To support NHS Boards with implementation of national or regional pathways at local level as agreed by The Best Start Implementation Programme Board;
- To critically analyse UK and national reports, audits and recommendations to inform improvement work, taking account of context and potential application;
- To communicate key messages for neonatal and maternity services, and to support appropriate quality assurance, clinical pathways and continuous improvement to further enhance standards of care and outcomes for women and babies;
- To work with stakeholders to develop and support the implementation of clinical practice and pathways supported by mechanisms for assurance and improvement;
- To support CPD and training opportunities where needs are identified or arise, in collaboration with other training providers.

2.3.2 NNN Facets and Work Plans

A draft NNN strategic work plan was developed, collating the priorities taken from the network’s commissioning papers, Scottish Government policy, notably *The Best Start*, stakeholder feedback and requests.

A high level representation of the NNN work priorities is shown in the ‘facet diagram’ below. The full draft strategic work plan is included in section 5 of this report. The work plan has been agreed by the NNN Core Steering Group, however, due to the aforementioned delays in the first meeting of the oversight board, the work plan has not yet been ratified by this group.

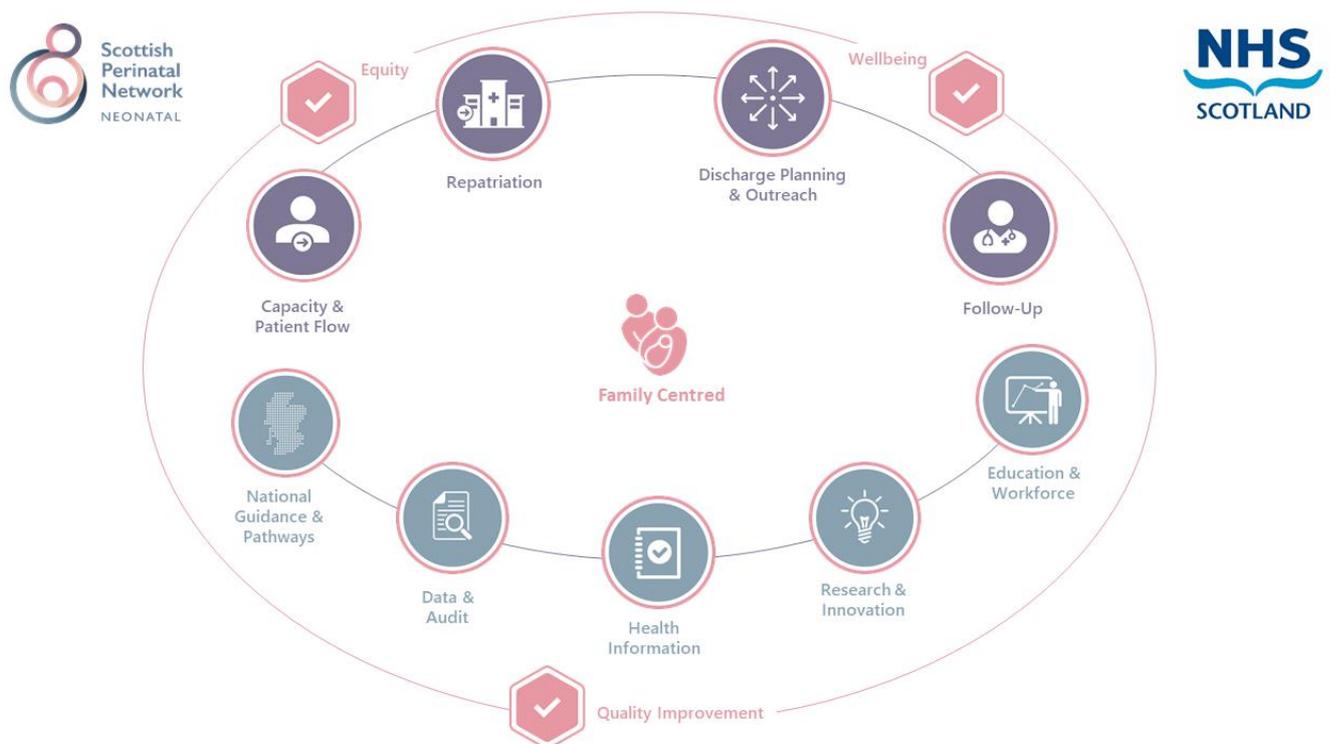


Figure 5: NNN Facet Diagram

The network has set up a number of working groups, or in some cases taken on working groups that were in place before the creation of the NNN. The purpose of these groups is to progress specific pieces of work as noted on the strategic work plan and then report progress back to the Core Steering Group. All work streams that were on hold since March 2020 due to the Covid-19 pandemic were restarted by January 2021. More detail on the various working groups is provided in section 3 below.

3. Network Work Streams

3.1 NNN Covid-19 Response

In response to the Covid-19 pandemic the NNN established a number of mechanisms to support clinical services with their response to the Covid-19 pandemic. These focussed on facilitating dialogue between all neonatal units (NNUs) to share learning and have timely, streamlined access to fast-evolving guidance and best practice. It also provided a platform for effective engagement between the neonatal clinical

community and Scottish Government, allowing issues to be escalated quickly and Scottish Government guidance to be disseminated efficiently.

The network achieved this by:

- Hosting weekly Covid-19 calls involving all NNUs, BAPM Representatives, and Scottish Government
- Issuing daily (later fortnightly) bulletins to disseminate information efficiently (an example is shown below)
- Making links to UK and Scottish Government and professional guidance accessible through a dedicated page on the SPN website
- Facilitating data sharing to support Public Health Scotland Covid-19 data returns

During the height of the pandemic the Covid-19 meetings were held weekly, this reduced to fortnightly and more recently to monthly upon consensus of the group.

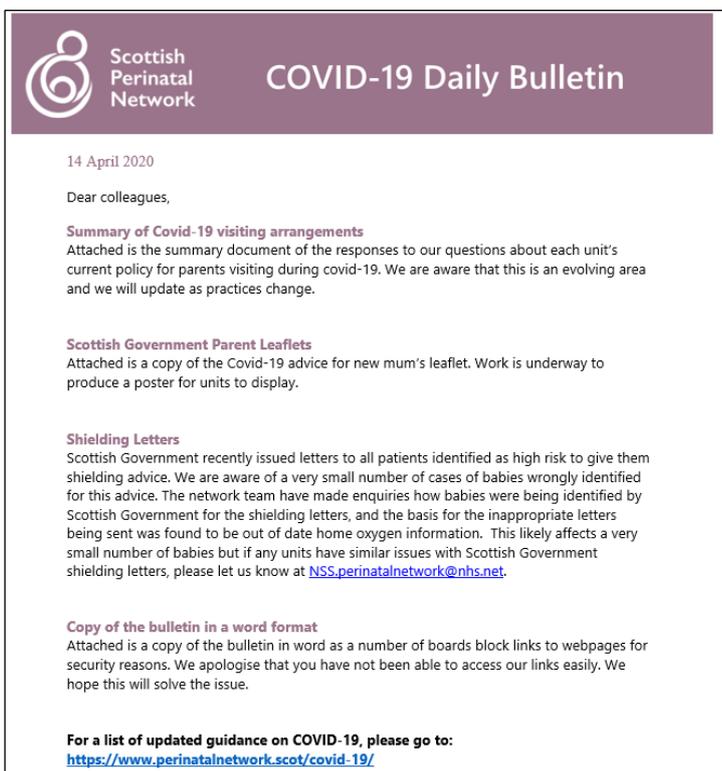


Figure 6: Example NNN Covid-19 Bulletin

3.2 Capacity and Patient Flow

3.2.1 Escalation and Cot Capacity

The NNN established an Escalation and Cot Capacity Working Group to develop processes, tools, guidance and resources for the management of escalation and neonatal cot capacity in Scotland to ensure effective transfer for neonates across Scotland, including the effective management of maternity service capacity to facilitate in-utero transfers.

During 2020/21 the group have agreed a Scottish Neonatal Unit Closure and Escalation Pathway / Standard Operating Procedure, which aims to ensure that across NHS Scotland closure of a NNU to new admissions:

1. Follows a consistent and objective process
2. That process supports staff in their decision making
3. Is recorded reliably and consistently, thereby facilitating regular audit and scrutiny
4. Is done in a way that maintains quality of care and minimises the adverse impact on patient flow, particularly repatriation

The working group have developed 'ScotCAT' which is the tool used to determine cot availability in Scotland. This was piloted successfully across Scotland. The group are now working closely with Clevermed, who supply the BadgerNET system used in all Scottish NNUS, in an aim to avoid duplicate data entry on multiple platforms. A unit closure flow chart has also been developed and agreed by the working group (subject to ratification through Network governance), as shown below:

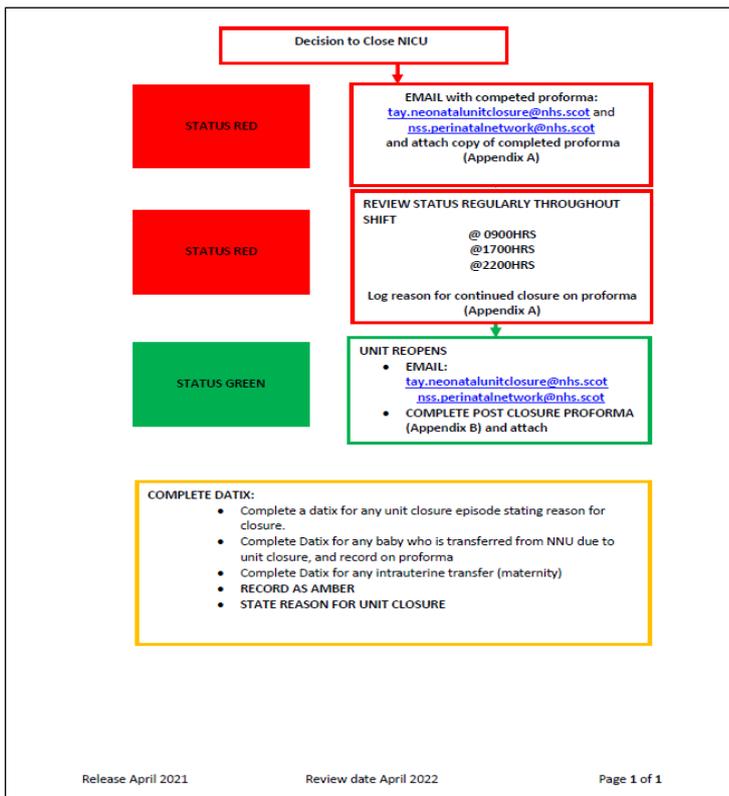


Figure 7: NNU Closure Flow Chart

3.2.2 In Utero Transfer Reporting

Neonatal transport is a key component of the neonatal model of care to ensure that access to the right level of care is available to each mother and baby, regardless of their home location. In cases where the required level of neonatal care is not available at the local NNU, the evidence demonstrates clearly that in utero transfer, allowing the baby to be delivered in a unit with the ability to provide the required level of care, leads to better outcomes compared to neonatal transfer after delivery. The West of Scotland Neonatal Managed Clinical Network historically produced reports for each NNU on the number and details of in utero transfers that took place in the West of Scotland. In the transition from three regional networks to one National Neonatal Network, the reporting of these transfers was paused.

During 2020/2021 the NNN has worked with colleagues in ScotSTAR, the neonatal transport section of the Scottish Ambulance Service, to re-start reporting on in utero transfers. The Network now produces quarterly reports of in utero transfers at unit, Health Board and Scotland levels (please see examples in

figure 8). The Senior Data Manager for the National Strategic Networks redeveloped the reporting system to automate reports, enhance presentation and improve data quality and governance.

Further work is ongoing to explore how in utero transfer data could be linked with existing data on deliveries to enhance understanding of the outcomes of in utero transfers.

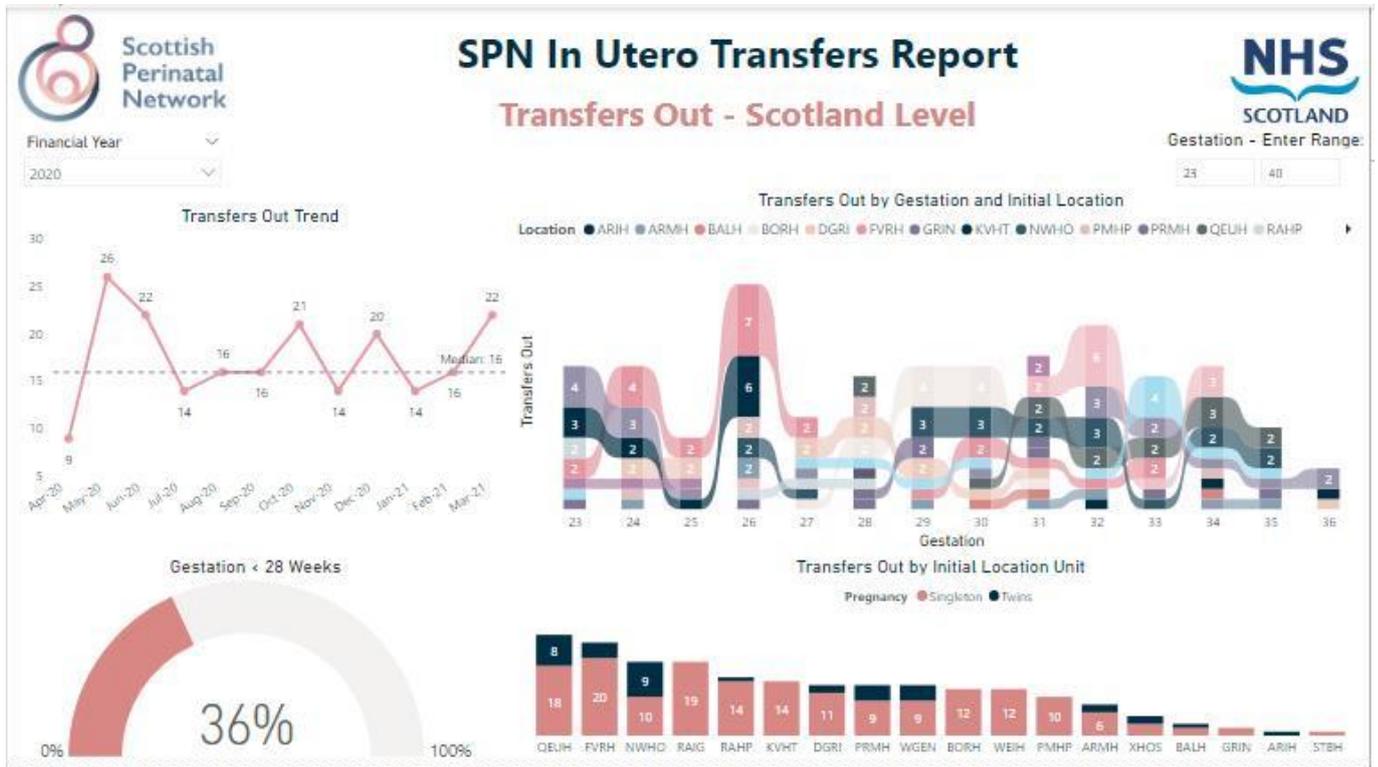


Figure 8a: Example of Scotland Level In Utero Transfer report for 2020/21.

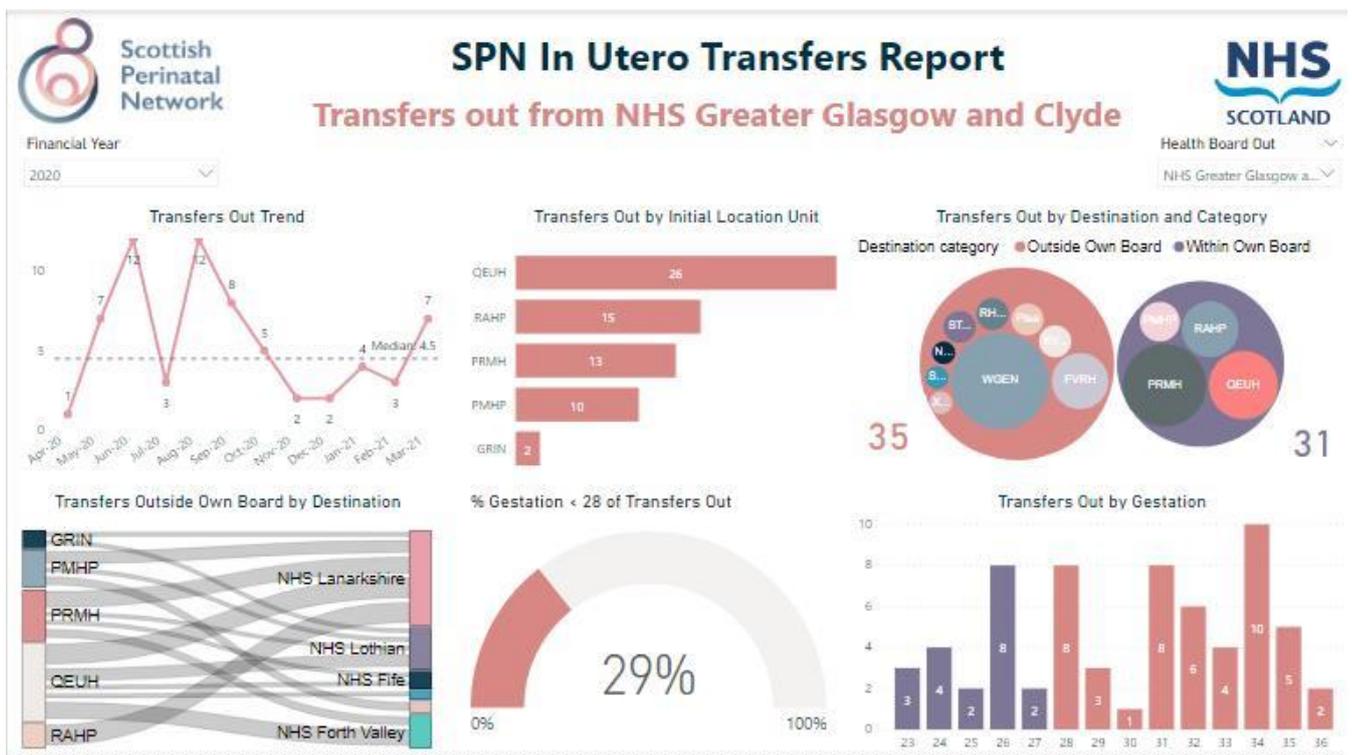


Figure 8b: Example Health Board Level In Utero Transfer report for 2020/21.

3.3 Repatriation

The aim of the Repatriation Working Group is to improve the delivery of integrated and consistent high quality neonatal care across the network, and to improve communication processes and sharing of information between clinical teams in referring and receiving units. This group was established in January 2021 and has made great progress towards delivering its objectives in the short time-frame it has been in existence.

It has drafted a Repatriation Pathway and tested it in all units in Scotland. A draft National Cot-Card has also been developed with the aim of providing a 'prompt' to initiate early repatriation planning and links with babies' base hospital. The draft Cot-Card pictured below is being piloted throughout Scotland in spring 2021.

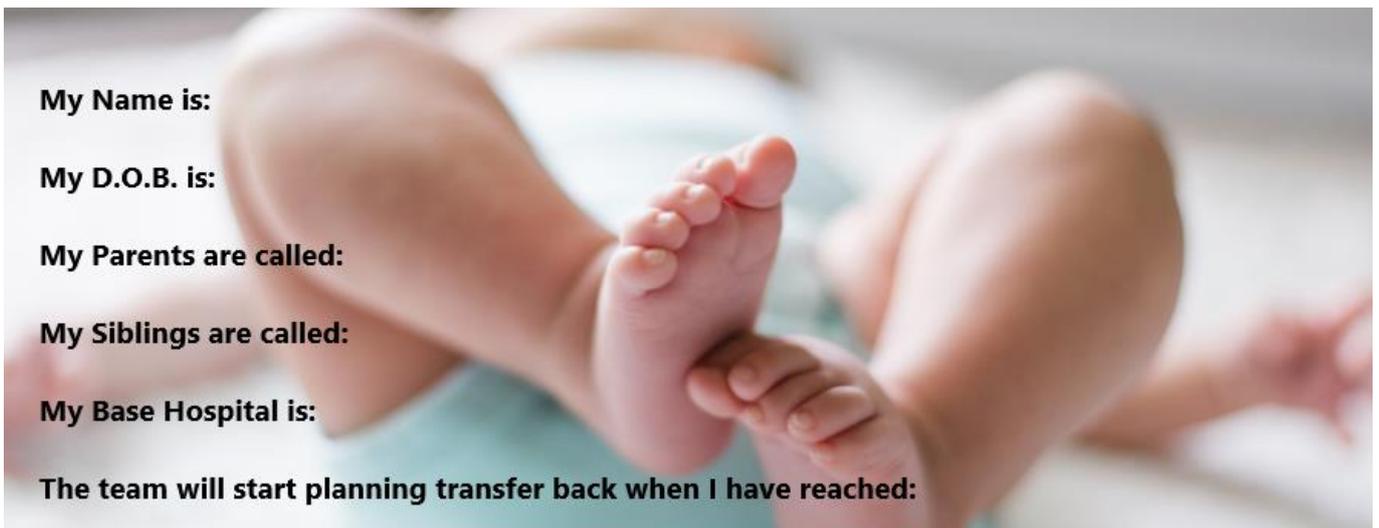


Figure 9: Draft Neonatal Cot Card.

The NNN has supported pilot Teams Calls between NNUs that are early implementer sites for the new neonatal model of care developed as part of the Best Start Implementation Programme: NHS Lothian / Fife and NHS Greater Glasgow and Clyde / Ayrshire and Arran. This pilot aimed to provide clarity on repatriation criteria and to improve pre-transfer communication. Weekly Repatriation Teams Calls between these units now takes place and feedback received has been excellent. Clinicians in base hospitals have specifically commented on how these calls have been particularly valuable to regularly inform base hospitals on the detail of care being provided; therefore, ensuring appropriate care plans can be in place to support successful repatriation at the earliest possible stage. A further pilot was then started between NHS Grampian and NHS Highlands.

The NNN has collated a database of repatriation nurse/doctor contact details and website links (where available) for all Neonatal Units in Scotland to further support effective communication between NNUs. The Network will maintain accuracy of this valuable information.

3.4 Discharge Planning

Due to prioritising the Covid-19 response, planned work to support the national implementation and evaluation of the [Neonatal Discharge Planning Framework](#), which was published in November 2019, was paused during 2020/2021.

3.5 Follow Up

Specific recommendations to ensure consistency of multi-disciplinary neuro-developmental follow up across Scotland were included within the *Best Start Review of Maternity and Neonatal Services* and a framework for practice has subsequently been developed in the Best Start Implementation Programme to support local service delivery. Traditionally this follow up has taken place within a neonatal out-patient clinic. However, continuing to deliver such multidisciplinary assessment by several clinicians within the constraints of the Covid-19 pandemic required an innovative approach. Scottish Government funded a project to pilot the use of 'v-Create,' a virtual platform facilitating remote follow-up across Scotland. Building on the successful initial pilot, this has now been rolled out to all Scottish neonatal units.

3.6 National Guidance and Pathways

Development of national guidance is a core facet of the NNN and the Network aimed to develop a standardised process for writing national guidelines. A working group was due to be established during 2020/21, however was placed on hold due to the Covid-19 pandemic and the request to prioritise development of a national home oxygen guideline as described in 3.6.1.

3.6.1 Home Oxygen Guideline

[National Neonatal Audit Programme \(NNAP\) data](#), published in 2020, highlighted the need to improve respiratory care for babies in Scotland. Alongside quality improvement work undertaken by the Maternity and Children Quality Improvement Collaborative (MCQIC) the NNN were approached to, as a matter of priority, develop consistent national guidance and resources for determining the requirement for home oxygen for neonates. The working group was on pause during the early stages of the Covid-19 pandemic but resumed progress towards this national guideline in autumn 2020.

As of March 2021, discussions are still ongoing to establish consensus on key aspects of the guideline, for which the current evidence and national and international guidance is inconclusive.

3.6.2 Term Respiratory Failure Guideline

A working group was set up near the end of 2020/21 to produce guidance on the investigation and management for babies with term respiratory failure. This is to assist staff to produce a step by step assessment and optimal planning pathway for term respiratory failure, and determine any onward need for referral to Extracorporeal Membrane Oxygenation (ECMO) centre.

The group was established with multi-disciplinary representation including pharmacy, cardiology and surgical input. to ensure their vital input in the development of this guideline. The guideline is expected to be published later in 2021.

3.6.3 Decontamination of Expressing Equipment

Variation in practice regarding the decontamination of expressing equipment across Scotland was identified following Health Protection Scotland (HPS) guidance supporting the use of dry storage for equipment used in expressing breast milk in NNUs. This guidance was based on the recommendations made by a joint working group of the Healthcare Infection Society and Infection Prevention Society 2016.

The Network set up a working group which carried out a scoping exercise in collaboration with National Infection Control colleagues across all NNUs in Scotland to determine current decontamination practice. The scoping exercise was completed in February 2021 and will inform best practice.

3.6.4 National Drug Monographs

The regional neonatal networks had previously produced a wide range of drug monographs to guide medication use in neonatal care. A key ask of the NNN has been to standardise guidance, including

nationally standardised monographs which would improve patient safety and enhance collaborative working with ScotSTAR, whilst mitigating the possibility for variance in practice due to factors such as staff rotation for example.

It has been agreed to progress a programme of standardising neonatal drug monographs via the Scottish Neonatal and Paediatric Pharmacists Group.

3.6.5 Therapeutic Hypothermia

The British Association of Perinatal Medicine (BAPM) published a new framework for practice on [Therapeutic Hypothermia for Neonatal Encephalopathy](#) in December 2020. The network has established a working group to support national implementation of the BAPM recommendations that all units should offer the same level of assessment and active cooling. This was previously available only to larger Scottish units and the ScotSTAR team during road transfer.

The Working Group worked with National Procurement to support NNUs with the cost effective procurement of cooling units. At the time of reporting two units have progressed to purchase the units whilst two are awaiting financial sign off at Board level. The manufacturers are collaborating with the Working Group in the development and production of a virtual educational package with complementary face-to-face teaching dependent on local Covid-19 restrictions. The Group are also working to develop national guidance and a pathway for remote/virtual support enabling staff in smaller local NNUs that may be less familiar with therapeutic hypothermia to access expertise in larger units. Following a scoping questionnaire, the preferred medium for delivering this support has been identified as MS Teams. Further work is required to ensure all units have access to MS Teams at all times.

3.6.6 National Pulse Oximetry Screening

In November 2020 the NNN hosted a pulse oximetry webinar to update the Scottish neonatal community on the latest evidence and developments on implementing pulse oximetry screening in other parts of the UK to improve the early detection of congenital heart disease in neonates, reducing morbidity and mortality. The webinar was attended by 80 delegates representing all Scottish NNUs as well as paediatric cardiology. It was agreed to establish a working group, which has subsequently developed a draft pathway for pulse oximetry testing of neonates in Scotland. This is currently being piloted in NHS Lothian.

'Tiny Tickers', a third sector organisation supporting children with congenital heart disease, have very generously agreed to fund the purchase of the required pulse oximeters for Scotland and have collaborated with the working group to ensure the most widely compatible and future proof models have been purchased.

3.7 Data and Audit

3.7.1 National Neonatal and Maternity Units' Core Data Dashboard

As part of the Best Start programme of work Public Health Scotland (PHS) were commissioned to establish a Maternity and Neonatal Data Hub, in collaboration with a range of partners including the SPN. The work of the Data Hub includes the development of core data dashboards for maternity and neonatal. The NNN has been leading on work to develop and agree a set of core measures that will form the neonatal core data dashboard.

The working group compiled a long list of over 100 measures relating to neonatal services, to be voted on in 2021/22 to select 20-25 measures to be included in the dashboard.

3.7.2 Neonatal Data Sharing Event

Scottish neonatal services are all established participants in the UK-wide National Neonatal Audit

Programme (NNAP) run by the Royal College of Paediatrics and Child Health. Following the success of the first NNAP Data Sharing meeting in March 2020, the second meeting (the first virtual data sharing event) took place in March 2021. This meeting provided a platform for all NNUs to review their data and share learning, ahead of submitting data returns to NNAP for the 2021 reporting period. The first virtual meeting of this group was a great success, with representation and engagement from all NNUs.

3.8 Health Information

3.8.1 SPN Website

The SPN website (www.perinatalnetwork.scot) has continued to developed as a resource for both professionals and families. The SPN website has been a core part of the network’s approach to supporting services during the Covid-19 pandemic, sharing the latest government and professional guidance via a dedicated web page. There is also a blog and Twitter (@ScotPerinatal) that the SPN team have continue to use to further engage both professional colleagues and families. As described later in the report (Section 3.2.2), it is anticipated a section for parents providing the details of facilities available at all neonatal units will be hosted on the SPN website from 2021/2022.

3.8.2 SPN Twitter

The SPN first joined twitter in November 2019. During 2020/21, the number of ‘impressions’ (the total tally of all the times a tweet has been seen either in followers’ timelines or in search results) increased from 6,600 during Oct-Dec 2019 to 17,200 during Jan-March 2021. Both the number of impressions and the number of times a link was clicked peaked in Oct-Dec 2020; this is likely due to increased activity by SPN during this period when compared to the other three quarters.

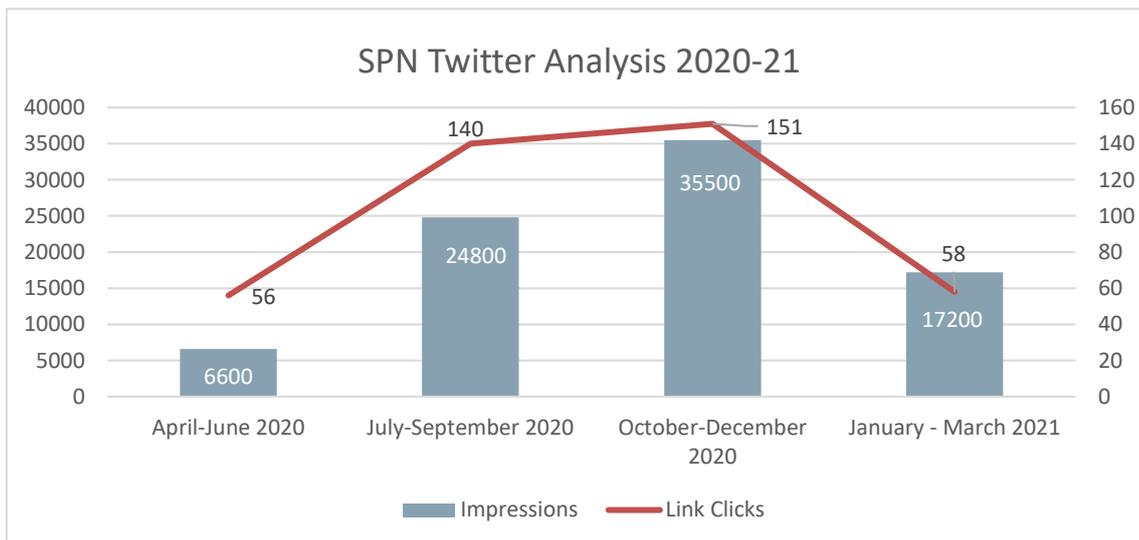


Figure 10: SPN Social Media Uptake 2020/21

3.8.3 SPN Newsletter

Starting in November 2020, the SPN team have developed and issued a monthly SPN newsletter as a mechanism to share important information and relevant events efficiently and widely throughout the network. The newsletter is distributed directly to 360 stakeholders who cascade further through their local networks.



Figure 11: Example of Scottish Perinatal Network Newsletter Homepage

3.8.4 My Neonatal Journey

'My Neonatal Journey' is a parent information resource to help families through the journey they and their baby/babies will take through neonatal services. The resource is a combination of a hard copy booklet and QR codes with links to online material, providing both general information about neonatal care and a platform to record their own journey.

During 2020/21 NHS Dumfries and Galloway and NHS Forth Valley piloted the use of this booklet in their Neonatal Units. Feedback was collated and suggested amendments were carried out. Members of the Repatriation Working Group have been asked to review the booklet for further refinement prior to network wide roll out in 2021.

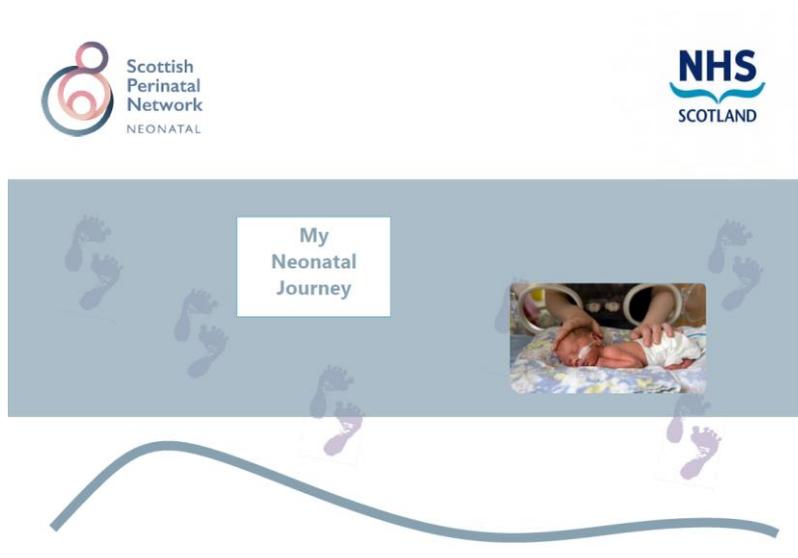


Figure 12: My Neonatal Journey Front Cover

3.9 Education and Workforce

3.9.1 NNN Consultant Forum

A Scottish Neonatal Consultants Forum was established in September 2020. The Forum provides a platform for all consultants across Scotland to come together quarterly to provide expert clinical advice to the Network and support the development of consistent and high quality neonatal care in Scotland. The Group agreed a Terms of Reference and nominated three individuals to represent the consultant body at NNN Core Steering Group level: a Chair of the Consultant Forum, a NICU representative and a LNU/SCU representative. The Chair of the National Neonatal Nurses Group (not hosted by the NNN) joined the Forum to provide a link to the Neonatal Nurses Group and similarly the Chair of the Neonatal Consultant Forum represents the Forum on the Neonatal Nurses Group.

3.9.2 NNN AHP Forum

Recognising the important contribution that an effective AHP service can make to improving outcomes for high-risk neonates, the Best Start report recommended that a framework for consistent and equitable speciality AHP support be provided for neonatal units. The NNN initiated plans to establish an AHP Forum in January 2021 with a first meeting of the full forum due to take place early in 2021/2022. The initial output of this group will be to work with NNN and Scottish Government to scope current neonatal AHP provision and how best this could be improved equitably across Scotland.

4. Plans for the Year Ahead

A draft strategic work plan was discussed and priorities agreed at the Core Steering Group in March 2021. As per the proposed governance structure it is now required to be ratified at SPN Oversight Board.

4.1 Network Governance

The main priority for 2021/22 is finalising the SPN governance arrangements, with the first meeting of the SPN Oversight Board meeting due to take place in May 2021.

4.2 Work Streams

The network's focus in 2021/22 will be to continue to progress the work underway in all existing work streams and to commence further work streams on key priorities as follows:

4.2.1 Escalation and Cot Capacity

In 2021/22 the NNN will:

- Ratify and roll out the escalation and cot capacity pathways and tools e.g. ScotCAT
- Continue to work with Clevermed to streamline data entry relating to cot capacity.
- Co-ordinate with Scottish Government and PHS colleagues the mechanics of the current cot capacity data recording and collaborate to avoid duplication and improve the quality of the data captured.
- Produce quarterly reports on cot capacity and unit closure

4.2.2 Repatriation

In 2021/22 the NNN will:

- Develop a core set of parent information to be hosted on the network website.
- Publish the agreed National Repatriation Pathway and Cot-Card
- Develop and agree national repatriation criteria
- Aim to establish weekly MS Teams calls between all hospital pathways

4.2.3 Discharge Planning

In 2021/2022 the NNN will evaluate the use of the Discharge Planning Framework and develop improvement measures in response to the evaluation feedback.

4.2.4 Follow Up

In 2021/2022 the NNN will establish a follow-up working group. Co-Chairs have been identified. The remit and work plan for this group are to be confirmed following the first meeting of the group in May 2021.

4.2.5 National Guidelines

In 2021/2022 the NNN will establish a National Guideline Group focussed on developing a national process for creating and managing neonatal clinical guidelines. This group will benefit from the experience of writing the first two national guidelines and will ensure all lessons learned in carrying out the process are captured by the group.

4.2.5.1 Home Oxygen Guideline

In 2021/2022 the Home Oxygen Guideline Group will finalise the draft guideline for ratification at the Core Steering Group.

4.2.5.2 Term Respiratory Failure Guideline

In 2021/2022 the Term Respiratory Guideline Group finalise the draft guideline for ratification at the Core Steering Group.

4.2.5.3 Decontamination of Expressing Equipment National Short Life Working Group (NSLWG)

In 2021/2022 the NSLWG will progress to developing the draft guideline with a tentative deadline of July/August 2022. Once agreed at the NSLWG this will be taken forward to the Core Steering Group for ratification.

4.2.5.4 National Drug Monograph

In 2021/2022 the NNN will develop a Once for Scotland approach to providing neonatal pharmacy guidance (in particular drug monographs).

4.2.5.5 Therapeutic Hypothermia

In 2021/2022 the Working Group will progress with the development of education resources, including video recordings of how to use the cooling equipment. An educational National Cooling Event is scheduled for 1st September 2021.

4.2.5.6 National Pulse Oximetry Screening

In 2021/2022 the Working Group will:

- Progress with national implementation through developing an agreed and ratified guideline and pathway.
- Continue to collaborate with Tiny Ticklers to provide all NNUs in Scotland with the appropriate number of machines
- Develop and deliver an educational package, whilst supporting all units with implementation.

4.3 Data and Audit

In 2021/2022 the NNN will establish a National Neonatal Data Group to provide strategic leadership to the Network on data and audit. It is proposed that once per year this group will meet as a perinatal group to ensure effective links to related work in the National Maternity Network.

A Senior Information Manager has been employed by the Strategic Networks to advise and support on reporting the effectiveness of the Networks. The network has already started employing the services of the Senior Information Manager and will further develop this programme of work over the next year as facets of work become more clear.

4.3.1 National Neonatal Core Data Dashboard

In 2021/2022 the NNN will agree a set of 25 measures to be included on the core dashboard to be developed by Public Health Scotland.

4.3.2 Neonatal Data Sharing Event

In 2021/2022 the NNN will work with the National Neonatal Data Group to organise and host the third data sharing event.

4.4 My Neonatal Journey

In 2021/2022 the NNN will apply any changes suggested and agreed by the Repatriation Group to the document. The draft document will be ratified by the Core Steering Group and Oversight Board prior to publication and implementation throughout Scotland.

5. Summary of Progress against Draft Strategic Work Plan

RAGB status	Description
RED (R)	The network is unlikely to achieve the objective/standard within the agreed timescale
AMBER (A)	There is a risk that the network will not achieve the objective/standard within the agreed timescale, however progress has been made
GREEN (G)	The network is on track to achieve the objective/standard within the agreed timescale
BLUE (B)	The network has been successful in achieving the network objective/standard to plan

Objective Scope	Facet	Strategic Network Objective	Objective	Description	RAGB Status
1. Neonatal Actions					
NNN	N/A	Engagement & Communication with Stakeholders	Engage with neonatal community through a series of local neonatal unit visits and meetings with other key stakeholders	Completed. Carried out 15 visits/meetings between Sep 2019 and Apr 2020. Discussed network structure, facets and local unit priorities.	B
NNN	N/A	Leadership & Partnership Working	Maintain network communication channels to facilitate effective neonatal service response to Covid-19 pandemic	Completed. Establish process for weekly (now monthly) national neonatal Covid-19 calls (incl. Scot Gov representation) to ensure sharing of guidance and best practice. Created dedicated Covid-19 page on SPN website and dedicated Teams channel.	B
NNN	Family Centred (P)	Engagement & Communication with Stakeholders	Provide information about the neonatal expenses fund on the network website	Completed. Information is now live on neonatal website in 'News' Section	B
NNN	N/A	Network Governance & Structure	Establish NNN Steering Group with agreed terms of reference	Completed. Second meeting on 24.3.21 and TOR agreed.	B
NNN	Education & Workforce (P)	Education, Training and Development	Create a Neonatal Consultants Group as a forum for peer support, development and sharing best practice	Completed. First meeting held Sep 2020, ToR was agreed at second meeting on 16.2.21	B

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NNN	Family Centred (P)	Strategic Service Planning & Development	Develop and roll out the My Neonatal Journey book	Piloted successfully in Dumfries and Galloway, and Forth Valley. Being followed up by Repatriation Group.	G
NNN	N/A	Network Governance & Structure	Agree NNN mandate and work plan	Draft facets and work plan agreed at steering group meeting on 24.3.21. To be raised with OSB on 14.5.21	G
NNN	Capacity & Patient Flow (N)	Strategic Service Planning & Development	Develop capacity management protocol, based on universal use of cot locator function in Neonatal Badgernet, including development of a monitoring process	Tool and SOP being piloted by Cot Capacity and Escalation Sub-group.	G
NNN	National Guidance & Pathways (P)	Strategic Service Planning & Development	Agree a standardised national approach to neonatal medicines and develop a single set of drug monographs	Claire O'Brien has agreed to chair this workstream. Network spoke at National Pharmacy Forum. First working group meeting date TBC.	G
NNN	Repatriation (N)	Strategic Service Planning & Development	Develop pathways and guidance for effective repatriation	Draft National Repatriation Guidance shared with the working group for comments. Looking at pathways and parent information.	G
NNN	National Guidance & Pathways (P)	Strategic Service Planning & Development	Develop National Guidance for Decontamination and Storage of Breast Milk Equipment.	Working group established. Fifth meeting took place 9.3.21. Practice across Scotland tabled at last meeting and HPS attended to discuss variance in practice	G
NNN	National Guidance & Pathways (P)	Strategic Service Planning & Development	Develop a national guideline for Home Oxygen in Neonates	Working group established and guideline in draft form. Further discussion needed to review draft and agree next steps	G
NNN	Data & Audit (P)	Continuous Improvement	Develop audit measures for neonatal care to assess effectiveness of neonatal service model	Data dashboard group with PHS input set up. Long list of 100+ measures has been developed, prior to a voting process taking place to establish a short list of c.20-25 measures that PHS can take forward to dashboard development. Agreement to create wider NNN data group.	G
NNN	Education & Workforce (P)	Education, Training and Development	Deliver an annual programme of Education Events	Delivered a virtual 'Cooling Event' meeting on 1 Sep 2020 and Pulse Oximetry Webinar on 10 November 2020.	G

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NNN	National Guidance & Pathways (P)	Strategic Service Planning & Development	Support National Implementation of BAPM guidelines relating to Therapeutic Hypothermia Cooling.	Working Group established, chaired by Julie-Clare Becher to support national implementation of TH Cooling, including education training and resources. NNN working with NSS to support National Procurement of equipment.	G
NNN	National Guidance & Pathways (P)	Strategic Service Planning & Development	Pulse Oximetry Screening	NNN supported Pulse Ox Webinar in Nov 2020. Attendees were unanimous about rolling National Pulse Ox Screening. Working Group, chaired by Vix Monnelly, established.	G
NNN	National Guidance & Pathways (P)	Strategic Service Planning & Development	Develop national guideline development and management process	Andrew Powls and David Quine have agreed to co-chair this workstream. Term Respiratory Failure working group developed draft guidelines and are working through National Agreement.	G

2. Perinatal Actions

SPN	N/A	Network Governance & Structure	Sign off NNN and NMN service agreements with NSD as per national commissioning process	Both SLAs signed off.	B
SPN	N/A	Network Governance & Structure	Establish SPN Oversight Board with agreed terms of reference	Agreement for the Best Start IPB to take on Oversight Board function. First OSB meeting on 14.5.2021	G
SPN	N/A	Network Governance & Structure	Develop effective communication and engagement approaches, incl. links with other networks or national programmes	Established SPN website and Twitter channel. Carried out stakeholder mapping. Regular liaison with SG policy and professional leads. Established links with other networks (SCANS, CEN, PeLICAN, PMHNS, SOCN); PIMH Prog Board; Pregnancy and Newborn Screening Programme Board; MCQIC; Mat Neo Data Hub	G
SPN	Family Centred (P)	Network Governance & Structure	Develop mechanisms for family involvement and engagement, utilising existing infrastructure for service user involvement	LC undertaking a scoping project to look at options for implementing new model for patient engagement and involvement. SM linking with English ODN as NNN aim to establish a PAG	G
SPN	Quality Improvement (P)	Network Governance & Structure	Develop a process for reviewing national audit data, e.g. NNAP, NMPA, MBRRACE	Neonatal network held a data sharing event in March 2021 where NNAP data was reviewed. The Teams meeting had 35 attendees and provided a good opportunity for discussion relating to the data. This model could perhaps be used for all audits.	G

Appendix 1: Agreed Steering Group Membership

- Lead Clinician (chair)
- Neonatal Consultants (representing all levels of units as well as geographically across Scotland)
- Neonatal Nurses (representing all levels of units as well as geographically across Scotland)
- AHP Representation
- Scottish Government Policy and Professional Leads
- BAPM
- ScotSTAR/SAS
- Pharmacy
- MCQIC
- Chairs of working groups
- Third Sector (e.g. Bliss and SANDS)
- Senior Manager
- Health Visitor/Primary Care
- Trainee
- Data representative(s)
- Obstetric / Fetal medicine / Midwifery representation from Maternity Network Steering Group
- Paediatric surgeon (Surgical Congenital Anomalies Network Scotland (SCANS) representation)
- Perinatal Mental Health Network (PMHN) / Perinatal and Infant Mental Health Programme representation
- SPN Management Team
- Working Group Chairs

Appendix 2: Finance

Details of the 2020/21 SPN budget and spend for both network staff salaries and non-pay expenditure are stated in the table below. This shows an underspend of £69,480.

		Budgeted (£)	Actual (£)	Variance (£)
Income		-430,229	-430,229	0
Pay		363,229	354,442	8,787
Non-Pay		67,000	6,307	60,693
	Office Running	0	695	-695
	Other Operating Costs	17,000	0	17,000
	Personnel Costs	50,000	0	50,000
	Professional Fees	0	5,461	-5,461
	Property Costs	0	0	0
	Staffing Costs	0	-81	81
		0	232	-232
TOTAL		0	-69,480	69,480

A small proportion of that underspend is the result of some delays in network staff taking up post, slightly reducing the actual pay cost compared what was anticipated. The main factor, however, was the impact of Covid-19. The move of all network meetings and events to online rather than face to face, as a result of the Covid-19 pandemic, has reduced costs associated with the venue hire, catering and travel that would be usual in the initiation phase of a new network.

At this stage it is not anticipated that network activities would continue to be delivered without any form of face to face interaction with network stakeholders. As such, cost savings of the magnitude seen in 2020/21 may not be replicable in future years.