Kent, Surrey, Sussex Neonatal Operational Delivery network

Annual Report 2020/21

KENT, SURREY, SUSSEX
NEONATAL NETWORK

Foreward

Welcome to the 2020/21 Annual Report for the Kent Surrey and Sussex Neonatal ODN. I am pleased to present the report in my first 10 months as network manager. The following report allows us to share our successes and achievements from the past year across our Network and within our 13 Neonatal Units and dedicated Neonatal Transport service.

What a year it has been for the NHS as a whole, dealing with the Covid-19 pandemic. We would like to extend our thanks to our many colleagues across all our hospitals on their excellent work in the planning and implementation of our coronavirus response. Throughout this difficult time, we have seen a truly collaborative approach and a dedication to provide safe, high-quality care for our babies and their families. As an ODN we worked with our neighbouring Thames Valley and Wessex network to produce a SE region neonatal Covid surge plan and testing guidance. Activity, capacity and staffing was monitored daily via the KSS dashboard during the first 2 waves of the pandemic. The ODN became a conduit between the national teams, regional teams, and our provider Trusts in supporting all through the challenging Covid-19 waves

Due to the impact of the pandemic a lot of our work programme and transformation plans were put on hold. Following a pause we were able to resume our transformation activities in line with the National Neonatal Critical Care Review (NCCR) in August. The ODN (NCCR) implementation plan was approved in November 2020. The NCCR aims to improve standards and experience of care for Neonatal infants and their families, supporting the National ambition to reduce neonatal death and brain injury by 50% by 2025 and the reduction of preterm birth from 8 % to 6 %. The ODN has been integrating with the Local Maternity Systems across KSS and have neonatal project support embedded in 3 of our 4 LMS's soon to become Local Maternity and Neonatal Systems LMNS. This will ensure that neonatal services are formally recognised at Board level in Maternity Transformation.

The network had a Getting it Right First Time (GIRFT) visit in June 2020 resulting in a comprehensive report and action plan. There were many areas of notable good practice across the network. The ODN has contributed to the GIRFT national report as exemplars of good practice in rolling out active cooling in all of our 13 units across KSS for babies with Hypoxic Ischaemic Encephalopathy (HIE) Identified areas of improvement included the development of network guidelines which support the delivery of evidence-based care. I would like to pass on my thanks to those individuals involved who have written and developed guidelines to support network wide practice.

In June 2020 we said goodbye to our previous network manager Vanessa Attrell and would like to acknowledge all the contributions she has made to the ODN over many years. Despite Covid-19 we have been successful in recruiting and expanding our ODN team. We welcomed Tamsyn Crane as Education Lead, Stephanie Chan-Lok network administrator and Louise Proffitt Lead Nurse in the latter part of the year.

Dr Aung Soe and Dr Peter Reynolds have continued as our Network Clinical Leads and we value their contribution to the delivery of high quality care, governance and provision of clinical expertise across the ODN.

The network is heavily reliant on data collection and analysis to monitor and benchmark our practices and I would like to thank our data analyst Jacqui for all her support. The ODN now uses the NHS Future platform on our website to share data.

The KSS ODN works very closely with the Strategic Clinical Networks for Maternity, Children and Young People, Academic Health Sciences, Local Maternity Systems and other ODN's nationally. As an ODN we continue to support and represent the network at local, regional and national level. The ODN has 4 LMS's affiliated within KSS; reciprocal engagement is good at LMS meetings, ODN Governance and Clinical Forums. We look forward to transforming to Local Maternity and Neonatal Systems (LMNS) and the development of joint projects which will have a positive influence on the neonatal care delivered.

Exciting times are ahead for the ODN with neonatal transformation and I am proud to be part of the team. Our team will be expanding to include a network Clinical Psychologist, Allied Health Professional roles in physiotherapy, speech and Language, occupational Therapy and dietetics. We will also be enhancing our Care co ordinator team with a Family Engagement Lead role. We will face many challenges in the incoming year, not least supporting our units to return to full parent and family access as pre pandemic.

Jennifer Lomas

Neonatal ODN Manager

Introduction to the Network

The Kent, Surrey, Sussex Neonatal ODN (KSS) covers a large geographical area and has approximately 46,000 births each year.

The table below shows selected indicators from the public health outcomes framework for determinates of health

Year for measure	Deprivation score (IMD) 2019	Infant mortality rate 2017 - 19	Low birth weight of term babies 2015-2019	Smoking in early pregnancy 2018/19	Under 18s conception rate / 1,000 2018	% population from ethnic minorities 2016
Kent	19.5	3.9	4.8	14.1	17.2	5.1
Medway	23.9	3.7	3.9	16.9	23.2	9.2
East Sussex	19.8	4.1	6.0	15.2	15.6	3.2
Brighton and Hove	20.8	3.0	6.6	8.4	12.6	11.2
West Sussex	14.4	3.5	7.0	10.9	12.9	4.5
Surrey	10.1	3.4	6.6	7.3	10.5	8.9
England	21.7	3.9	6.9	12.8	16.7	13.6

In terms of the overall deprivation score, Medway is the most deprived and Surrey the least deprived. Medway also has the highest score for smoking in early pregnancy and under 18s conception. However, other indices illustrate a more complex picture with West Sussex having the highest rate of low weight babies.

Across KSS there are 11 acute trusts delivering neonatal care in 13 Neonatal Units. The KSS neonatal transport team have operational hubs co-located in 3 NICU's: St Peter's Hospital, Chertsey, Surrey; Medway Maritime Hospital, Gillingham, Kent; and Royal Sussex County Hospital, Brighton, Sussex.

Of the 13 neonatal units 4 are Neonatal Intensive Care Units (NICU), 3 are Local Neonatal Units (LNU) and 6 are Special Care Units (SCU). Each unit has designated cots to deliver different levels of care; this supports workforce calculations and capacity planning design of services.

		Births 2020/21	1st admissions to NNU	Level 3 (IC) cots	Level 2 (HD) cots	Level 1 (SC) cots	Total NNU cots	% occu-pancy
NICU	Medway Maritime	4,561	491	8	4	16	28	73%
NICU	Royal Sussex County	2,570	310	9	8	10	27	76%
NICU	St Peter's, Chertsey	3,415	287	8	8	12	28	51%
NICU	William Harvey, Ashford	3,686	281	7	4	14	25	62%
LNU	East Surrey	4,473	392	2	6	13	21	48%
LNU	Frimley Park	5,182	319	2	6	8	16	54%
LNU	Tunbridge Wells	5,600	363	2	4	12	18	65%
SCU	Darent Valley	4,467	378	0	3	15	18	65%
SCU	East Sussex	2,853	188	0	0	12	12	43%
SCU	PRH, Haywards Heath	2,120	128	0	0	8	8	44%
SCU	QEQM, Margate	2,396	193	0	2	10	12	49%
SCU	Royal Surrey County	2,611	162	0	4	6	10	38%
SCU	Worthing	2,127	118	0	2	10	12	46%
	KSS ODN Total	**46,061**	**3,610**	**38**	**51**	**146**	**235**	**58%**

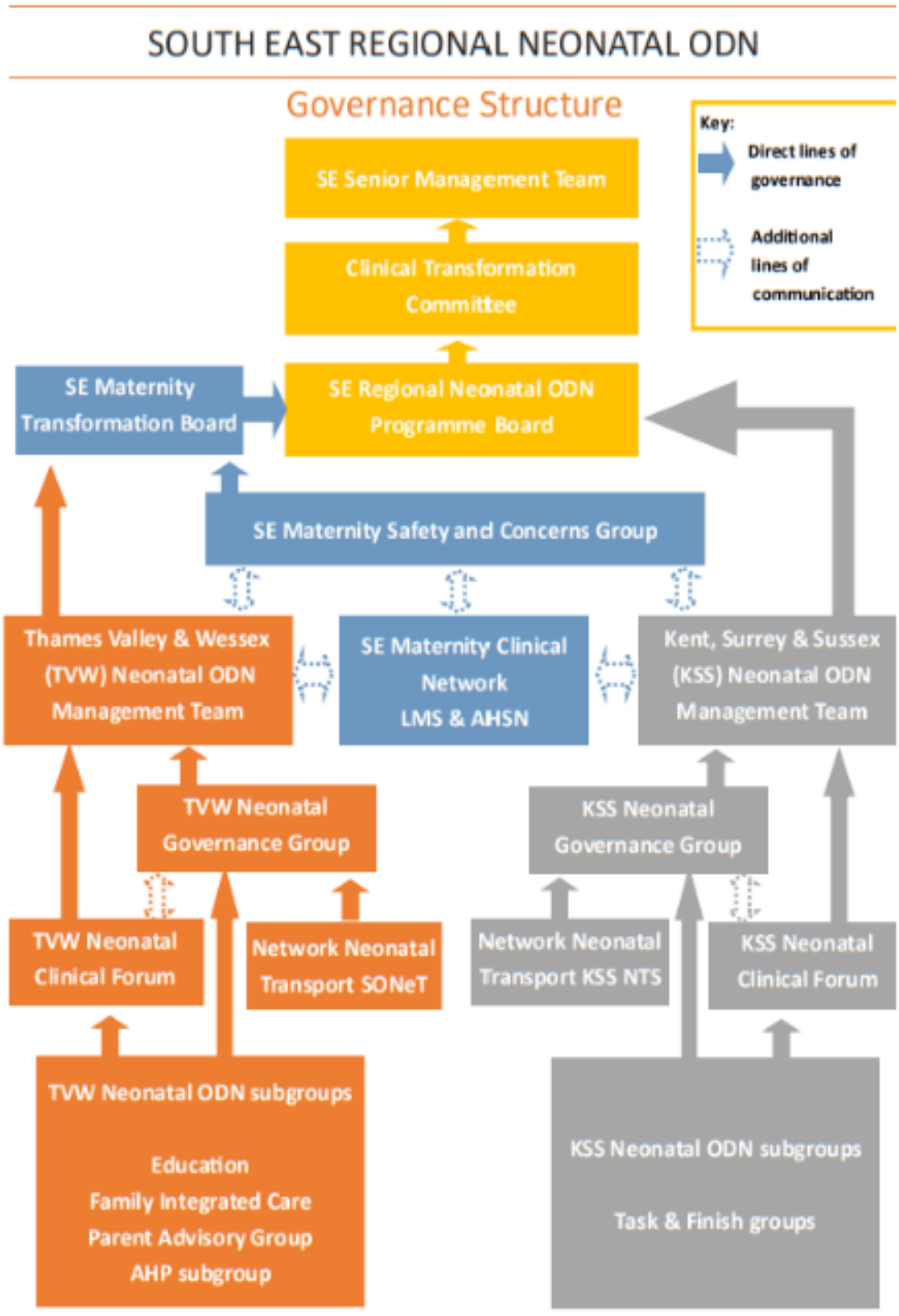
Two of the Trusts have neonatal units that span ODNs. Wexham Park Hospital in Slough and St Richards Hospital in Chichester have neonatal tertiary pathways within the Thames Valley and Wessex ODN.

Neonatal surgery is provided within the ODN at the Royal Sussex County Hospital and also externally at St George's Hospital, Evelina Hospital, King's College Hospital and Southampton University Hospital.

The KSS ODN has 4 NICU's which provide care for babies from 23 weeks' gestation. Following the 2019 publication from BAPM 'Perinatal management of extreme preterm birth before 27 weeks' gestation' in some cases babies may be considered viable at 22 weeks, this may have some impact on cot capacity but currently this is not fully understood.

There are 3 LNU's which deliver care to infants >27weeks (28 week multiples) and > 800gms and 6 SCU's which deliver care to infants≥31 weeks and >1000gms > 31 weeks' gestation.

There are 4 local maternity systems (LMS) within the KSS ODN footprint, and 2 local learning systems (LLS). The ODN works collaboratively with the South East Maternity Clinical Network (MCN) and reports to the SE Regional Maternity Transformation Programme Board and the SE Specialised Commissioning Programme Board.


SOUTH EAST REGIONAL NEONATAL ODN
Governance Structure
Key:
Direct lines of governance
Additional lines of communication
SE Senior Management Team
Clinical Transformation Committee
SE Maternity Transformation Board
SE Regional Neonatal ODN Programme Board
SE Maternity Safety and Concerns Group
Thames Valley & Wessex (TVW) Neonatal ODN Management Team
SE Maternity Clinical Network LMS & AHSN
Kent, Surrey & Sussex (KSS) Neonatal ODN Management Team
TVW Neonatal Governance Group
KSS Neonatal Governance Group
TVW Neonatal Clinical Forum
Network Neonatal Transport SONeT
Network Neonatal Transport KSS NTS
KSS Neonatal Clinical Forum
TVW Neonatal ODN subgroups
Education
Family Integrated Care
Parent Advisory Group
AHP subgroup
KSS Neonatal ODN subgroups
Task & Finish groups

Meet the Team

KENT, SURREY, SUSSEX
NEONATAL NETWORK

Jennifer Lomas
Network Manager

Dr Aung Soe
Clinical Lead

Dr Peter Reynolds
Clinical Lead

Louise Proffitt
Lead Nurse

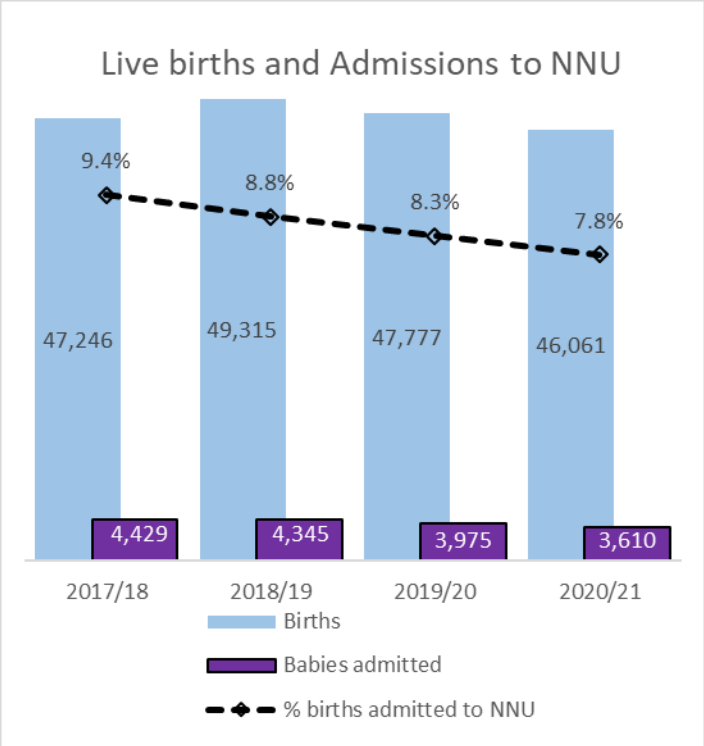
Tamsyn Crane
Lead Network
Educator

Jacqueline Bobby
Data Analyst

Stephanie Chan-Lok
Network
Administrator

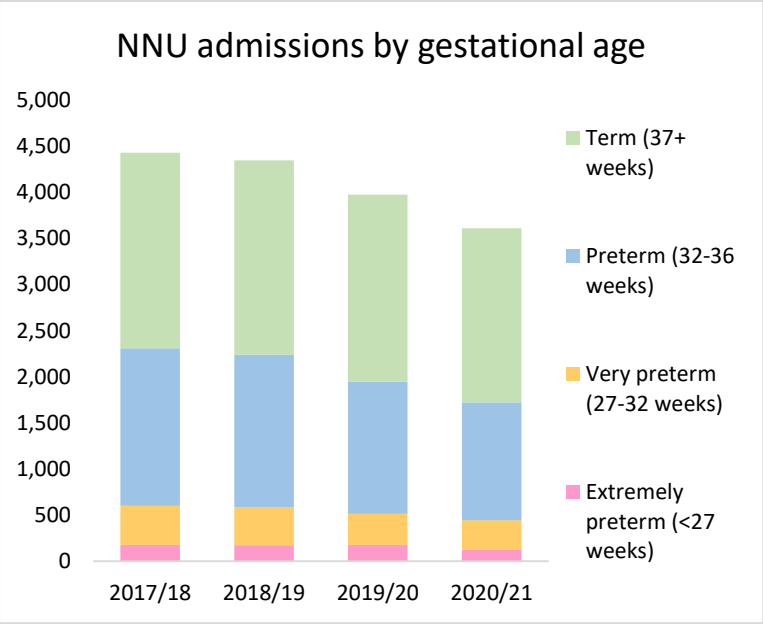
Network Activity

Births and admissions



Over the past four years there has been a 2.5% decrease in live births, from 47,246 in 2017/18 to 46,061 in 2020/21. This is consistent with a national trend where birth rate has declined every year since 2013.

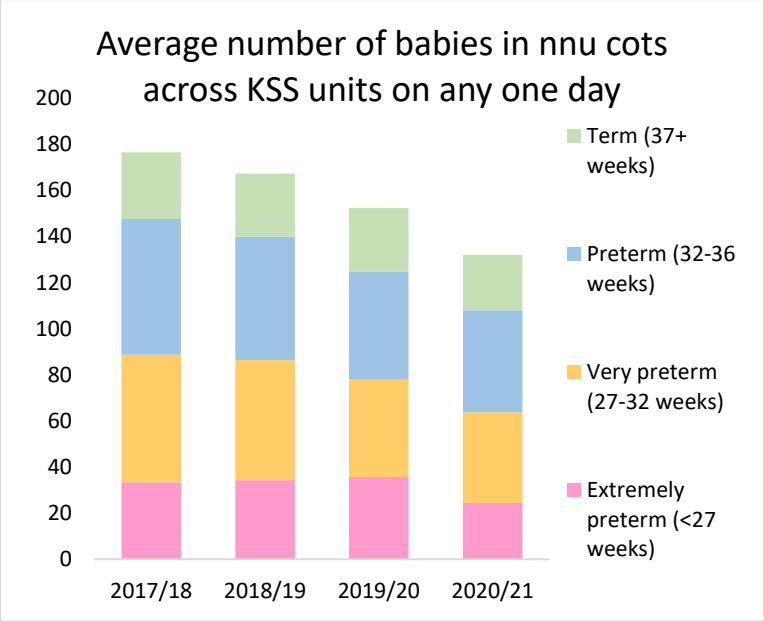
As with live births the total number of admissions to NNU has steadily decreased from 4,429 first episode admissions in 2017/18 to 3,610 in 2020/21. This is a reduction of 18%, - proportionally a much bigger reduction than that of live births. This is largely because more babies are supported alongside their mothers on the postnatal ward or in transitional care rather than being admitted to a neonatal unit.



Note: extremely preterm taken to be all singleton babies <27 weeks gestation, twins and multiple births of <28 weeks and other babies of <800g birthweight

Around half of admissions are for preterm babies (<37 weeks' gestation) and half for term babies (37+ weeks).

However, the lower gestation babies tend to stay a lot longer on an NNU. On average an extremely preterm baby stays 9+ weeks on an NNU, a very preterm baby 6 weeks, a preterm (32-36) baby 12 days and a term baby 5 days.



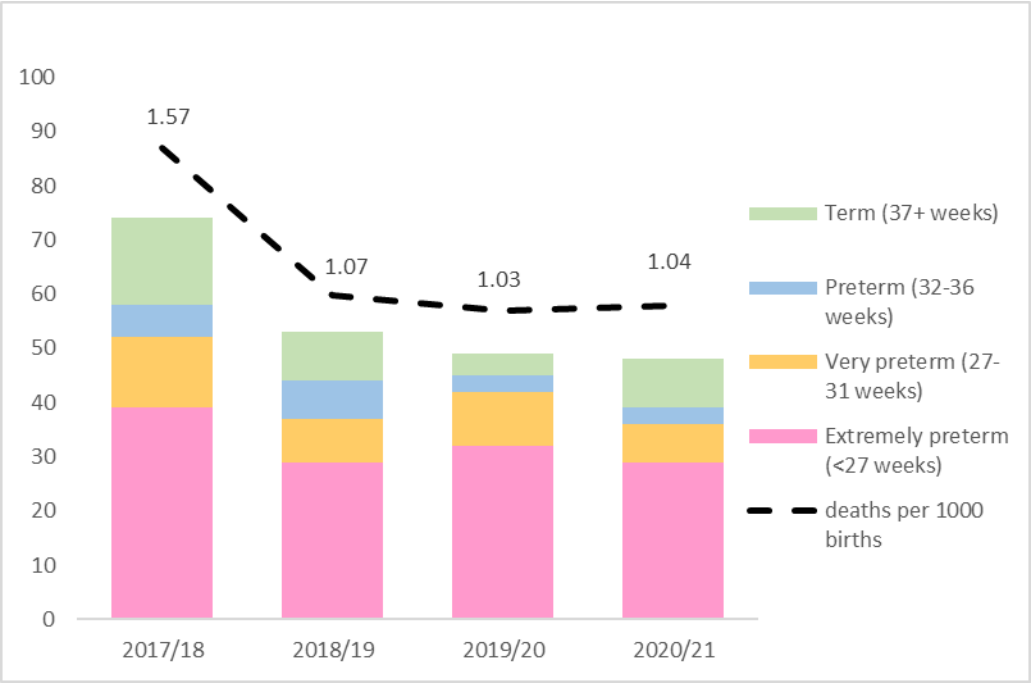
The average number of babies in KSS neonatal cots at any one time has reduced from 176 in 2017/18 to 132 in 2020/21

Though half of admissions are for preterm (<37 weeks) babies, more than 80% of the babies on an NNU at any one time will be preterm and around half very preterm (<32 weeks)

Network Mortality

There were total 48 neonatal deaths recorded in BadgerNet in units across the KSS Network in 2020/21. The majority of these were in infants born less than 27 weeks gestations (29, 60%). Seven deaths were in infants born between 27 and 31+6 weeks, 3 deaths in infants 32 to 36+6 weeks and 9 deaths in infants born ≥37 weeks gestation (27%).

Annual deaths on KSS NNU per 1000 live births, from 2017/18 to 2019/202

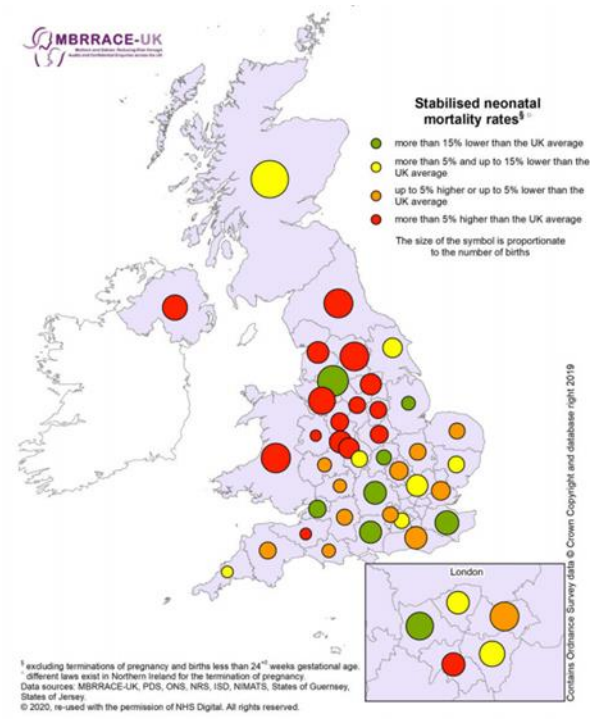


The total number of neonatal deaths recorded in BadgerNet has fluctuated over the years, as would be expected with the small numbers involved .

Neonatal deaths are closely reviewed locally using the Perinatal Mortality Review Tool (PMRT). The ODN management team monitor and regularly review all network deaths. Network mortality meetings provide a forum for the ODN and provider Trusts to reflect upon outcomes and share learning.

Neonatal deaths in KSS NNU do not tell the whole story. Some deaths will occur outside the NNU (home, delivery room, hospice) and some babies might be transferred to London specialist NNUs and these mortalities are not reflected in this data.

There is a national surveillance process and yearly reports published by MBRRACE (Mothers and Babies: Reducing Risk through Audits and Confidential Enquiries) that reviews perinatal death rates across populations and standardise for many factors including mother's age, deprivation, ethnicity and gestation. Their latest report (published in December 2020) covered deaths in 2018.



The results for 2018 at STP level are illustrated on this map. For KSS STPs neonatal mortality rates are around average or below average. It should be noted however that these rates vary considerably year by year.

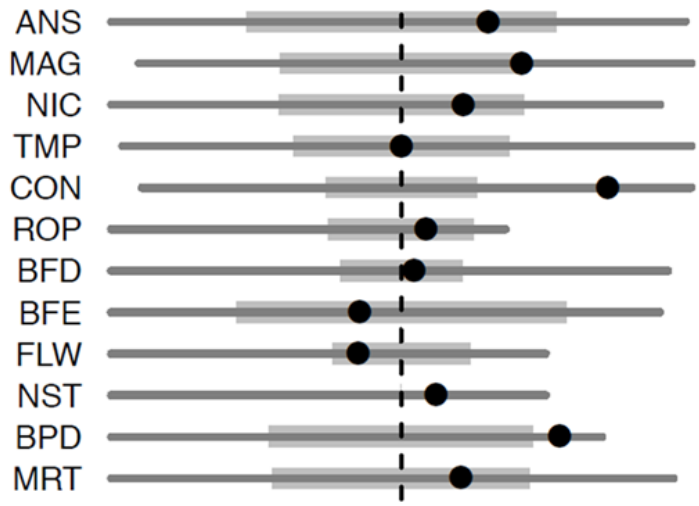
National Neonatal Audit Programme

The National Neonatal Audit Programme (NNAP) is a national clinical audit run by the Royal College of Paediatrics and Child Health (RCPCH) on behalf of the NHS. It is commissioned by the Healthcare Quality Improvement Partnership (HQIP) and has been running since 2006.

The NNAP aims to helps neonatal units improve care for babies and their families by identifying areas for quality improvement in relation to the delivery and outcomes of care. As such a set of measures has been developed and NNAP produces and publishes data for each unit in the country for each of these measures. This enables units and ODNs to view their performance in comparison with national standards and against units and ODNs across the country and identify areas for quality improvement.

The latest report was produced in November 2020 and covered data for 2019. The summary spine chart below summaries KSS comparative performance for 10 key measures

KSS performance is above average (to right of line) for most measures. The ODN performs better than expected for parental consultation and Bronchopulmonary Dysplasia (BPD) and within 'expected' range for other measures.



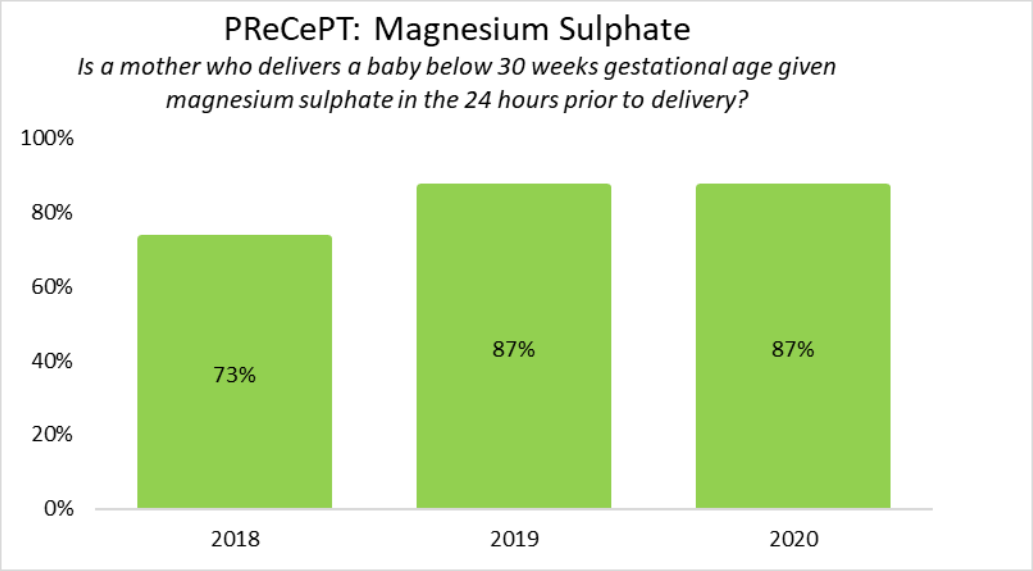
KSS performance, relative to other ODNs is shown with a disk. The line extends from the lowest to the highest value for that measure.
The rates are scaled so that the national rates are aligned to a single vertical line for all measures and orientated so that better performance is to the right hand side. The grey bar describes the expected range.

Code to measures covered in chart

ANS: Is a mother who delivers a baby between <34 weeks' gestation given at least one dose of antenatal steroids?
MAG: Is a mother who delivers a baby below 30 weeks' gestational age given magnesium sulphate in the 24 hours prior to delivery?
NIC: Is an admitted baby born at less than 27 weeks' gestational age delivered in a maternity service on the same site as a designated NICU
TMP: Does an admitted baby born at less than 32 weeks' gestational age have a first temperature on admission that is both between 36.5–37.5°C and measured within one hour of birth
CON: Is there a documented consultation with parents by a senior member of the neonatal team within 24 hours of a baby's first admission
ROP: Does an admitted baby born weighing less than 1501g, or at gestational age of less than 32 weeks, undergo the first retinopathy of prematurity (ROP) screening in accordance with the current guidelines
BFD: Does a baby born at less than 32 weeks' gestational age receive any of their own mother's milk at discharge to home from a neonatal unit?
BFE: Does a baby born at less than 32 weeks' gestational age receive any of their own mother's milk on day 14 of life?
FLW: Does a baby born at less than 30 weeks' of gestational age receive medical follow-up at two years
NST: What proportion of nursing shifts are numerically staffed according to guidelines and service specification?
BPD: Does an admitted baby born at less than 32 weeks' gestational age develop bronchopulmonary dysplasia (BPD)?
MRT: Mortality until discharge home in very preterm babies

PReCePT (Prevention of Cerebral Palsy in PreTerm Labour)

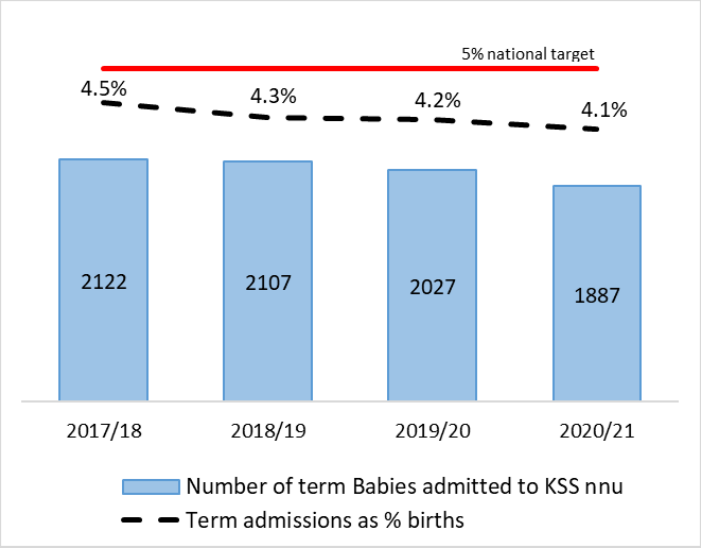
PReCePT is the first ever perinatal quality improvement programme delivered at scale across England, bringing together midwives, obstetricians and neonatologists in every maternity unit in the country. This project was designed to help reduce cerebral palsy in babies through the increased antenatal administration of magnesium sulphate (MgSO4) to mothers during preterm labour, costing from £1 per individual dose. Evidence shows that for every 37 mothers who receive magnesium sulphate below 30 weeks gestation, one case of cerebral palsy is prevented. In 2020 for KSS 226 out of 261 (87%) mothers delivering < 30 weeks received Magnesium sulphate which is calculated to result in the prevention of cerebral palsy in 6 babies. This exceeds the national target of 85%.



ATAIN (Avoiding Term Admissions Into Neonatal units)

There is overwhelming evidence that separation of mother and baby so soon after birth interrupts the normal bonding process, which can have a profound and lasting effect on maternal mental health, breastfeeding, long-term morbidity for mother and child. This makes preventing separation, except for compelling medical reason, an essential practice in maternity services and an ethical responsibility for healthcare professionals

To reduce avoidable separation of mother and baby in the early days of life there is a national target that no more than 5% of all live births should be admitted to NNU if born at term (≥37+0 week gestation).

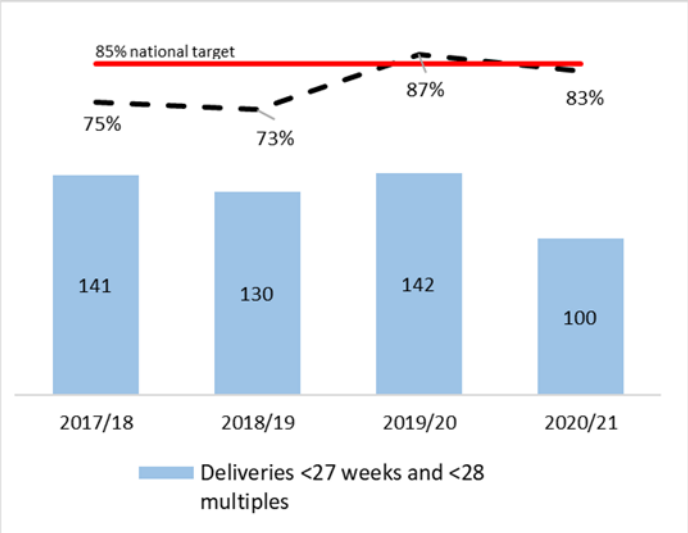


There has been a year on year reduction in the term babies admitted to NNUs in KSS.

In 2020/21 the percentage of term admissions to NNU across KSS was reported as 4.1% of all live births putting the network well within the national target.

Births in the right place

Babies who are born at less than 27 weeks' gestational age are at high risk of death and serious illness. National recommendations in England and Scotland state that neonatal networks should aim to configure and deliver services to increase the proportion of babies at this gestational age being delivered in a hospital with a neonatal intensive care unit (NICU) on site. This is because there is evidence that outcomes improve if such premature babies are cared for in a NICU from birth. There is a national target that at least 85% of babies born at less than 27 weeks' gestational age, or <28 week multiple birth, should be delivered in a maternity service on the same site as a NICU.



In 2020/21 83% of deliveries for babies <27 weeks or <28 week twins were in a maternity unit with a NIC, but notable was the comparative low number of deliveries in this gestation group compared to previous years so there were fewer babies 'born in the wrong place' in 2020/21 than any previous year.

As a network we are requiring a report to review every baby identified as 'born in the wrong place' these are scrutinised by both the ODN and LMNS to ensure that any lessons to be learnt have been identified and shared. The ODN is working with the MatNeo Safety Improvement Programme and the LMNS's on a quality improvement project to support the region in meeting and exceeding the national targets in the incoming years. Quarterly reporting for assurance of this key metric to the SE Maternity Transformation Board and Specialised Commissioning Programme Board is in place .

National Context/ Neonatal Critical Care Review

Following a pause to the programme during the Covid pandemic the NCCR was reinstated in August 2020, and ODN high level delivery plans were submitted to the National team in November. The implementation of this workstream alongside the recommendations from the GIRFT review form the main stay of our current work programme.

Local capacity reviews and GIRFT findings concurred that the level of activity in the network does not justify the presence of 4 NICU's. The ODN has carried out modelling and is working with the SE Specialised Commissioning team on the potential redesignation of NICU's across Kent and Medway.

Workforce transformation is a key priory across the ODN and we have been working closely with Health Education England , addressing shortfalls in our nursing/medical and Allied health professional (AHP) workforce. Nursing workforce returns from our providers enabled us to RAG rate those units where there was the biggest deficit in funded establishments. We are pleased to say that we have been successful in securing our bid for increased establishment funding from the LTP for our most underfunded unit in KSS. A gap analysis carried out on AHP provision demonstrated a lack of funding locally for these invaluable posts. The LTP has committed funding to develop AHP support and will release funding in 21/22 to introduce network level roles within the ODN. We are pleased to report that the SE ODN's were successful in a bid for funding from the Mental Health Network to recruit to a network Clinical Psychologist role.
Recruitment and retention of staff in our providers has been high on our agenda and we are working with units on their staffing action plans. We are exploring the nursing associate role and how education providers can help with funding and career pathways. We have seen an increase in Advanced Neonatal Nurse Practitioner training across the ODN to support the medical workforce. In a bid to support our newly qualified nurses we are introducing the neonatal preceptorship programme in September 2021.

To enhance our family experience across the ODN we have successfully recruited to a parent advisory group (PAG) to ensure the parent voice is heard in everything we do. This group will be working closely with the maternity voices partnership and the newly recruited care co ordinators in the network. The chair of the PAG attended his first ODN Governance meeting in March 2021

Plan on a Page – KSS ODN Neonatal Critical Care Review Programme

Strategic Aims: Working with systems and providers across the SE region to implement the National Review of Neonatal Critical Services in response to Better Birth Maternity Transformation Programme

Objectives:

1. To reduce still birth, neonatal death and brain injury by 50% by 2025
2. To reduce pre-term birth from 8% to 6% by 2025
3. Avoiding term admissions into neonatal units (to maintain regional target <5%)
4. Babies <27 weeks born in maternity units with a neonatal intensive care unit (maintain national target of >85%)

Workstreams

1. Restoration and recovery
2. Aligning Capacity
3. Neonatal Workforce
4. Family Experience

In Scope:
Babies born within SE region requiring neonatal services

Out of Scope:
Babies >44 wks

Key Tasks for the Programme

1. Recruitment to key network roles
2. Development of work programmes for 2021/22 – 2024/25
3. Review and support restoration and recovery processes
4. System and Stakeholder Mapping
5. Redesignation project
6. Workforce and education strategy

Priority Issues

1. Family access to units due to Covid restrictions
2. Allocation of funding for the network
3. Recruitment of network workforce to deliver NCCR programme
4. Lack of project lead role to deliver the redesignation project

Outcomes/Benefits:

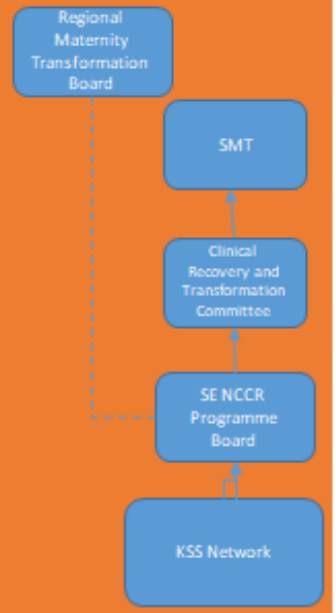
1. Equitable access and services for service users
2. Improved resilience and collaborative working for perinatal services. Positive engagement with ICS's
3. Improved performance against key indicators for neonatal services
4. Reduction in inequalities for service users across the region
5. All units to meet BAPM standards for optimisation of neonatal care

Documentation

1. TOR for network
2. Monthly Highlight Report
3. Programme plans
4. SE Governance Structure

Timeline for project: 2021 – 2025 with regular review points

Governance



Getting it Right First Time (GIRFT)

The GIRFT team launched a national Neonatal workstream in September 2019. The ODN welcomed the team for a virtual visit in June 2020 to present the report to stakeholders within the region. The methodology applied for the review involved:

- The analysis of data from multiple data sources - including HES, NHS Resolution, BadgerNet and national audits by NNAP, NHS Digital and NHS England to allow a bespoke data report to be generated for each provider;
- The provision of data packs and plans to conduct deep dive visits for neonatal ODNs and trusts;
- Once all data analysed and a significant number of deep dive visits undertaken a national report to be published.
- Support trusts with ongoing data and advice in responding to local and national recommendations, via the regional GIRFT implementation teams.

The network management meeting and the subsequent KSS network meetings were held and we saw good engagement from the provider Trusts. We consider some of the highlights of the report below.

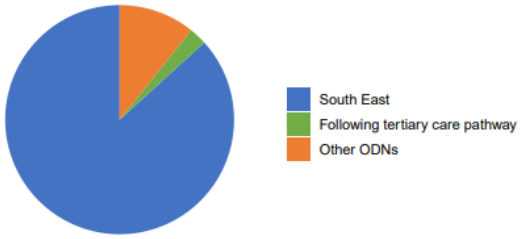
Excellent collaborative working with neighbouring TVW ODN to provide mutual support, share best practise, benchmark data across both networks. Benchmarking data rag rated and presented quarterly, encouraging active discussion and engagement from clinicians.

Pathway monitoring across KSS is very robust and includes exception reporting to LMS safety leads for further investigation. Adherence to pathways across all hospital sites is good and has improved over the last 3 years. Response times for uplift for intensive care are in the upper quartile and there has been improvement over the 3 year period despite the large geographical patch and difficulties with medical staffing. There is excellent co-operation between the three transport hubs to support the network.

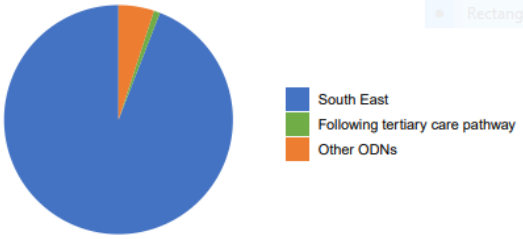
5.1 Distribution of babies managed within network and in other networks

Metric	Source and Year	Network	England	Position	Score % (0 – 10% | 10 – 25% | 25 – 75% | 75 – 90% | 90 – 100%)
Proportion of babies < 31 weeks discharged home from this network who had all their care in this network or were following a tertiary care pathway out of network	Badgernet MY2018/19	94.99%	93.69%	7/12	

Proportion of babies < 31 weeks admitted to this network, who were discharged home from this network and other networks
Source: Badgernet MY2018/19



Proportion of babies < 31 weeks discharged home from this network, who had care in this network only, and other networks
Source: Badgernet MY2018/19



The network is in the lowest 10th percentile for both babies remaining in neonatal units beyond 44 weeks and ATAIN performance; and lowest quartile for number special care / normal care days

provided when oxygen was not administered. This is a testament to the longstanding work the network has done around avoiding term admissions and reducing mother-baby separation

5.16 Minimising separation - moderate/late preterm and term

Metric	Source and Year	Network	England	Position	Score % 0 – 10% | 10 – 25% | 25 – 75% | 75 – 90% | 90 – 100%
For babies born 34 - 36 weeks, how many special care / normal care days were provided when oxygen was not administered?	NNAP 2018	5.9	6.6	10/12	
For babies born 37+ weeks, how many special care / normal care days were provided when oxygen was not administered?	NNAP 2018	2.7	3.0	10/12	
Proportion of babies 37+ weeks admitted to neonatal units (XA01/02/03Z) (excluding congenital abnormalities)	Badgernet MY2018/19 / GIRFT Clinical Services Questionnaire 2019	3.9%	4.8%	11/12	

* A patient is noted as having a congenital abnormality if their admission records indicate one is suspected or confirmed.

Performance is in the best decile for intubation in delivery suite, and receiving only 0-1 day of ventilation in first week. The ODN is developing network guidelines on resuscitation and stabilisation of the newborn.

7.3 Resuscitation and stabilisation

Metric	Source and Year	Network	England	Position	Score % 0 – 10% | 10 – 25% | 25 – 75% | 75 – 90% | 90 – 100%
Proportion of babies requiring intubation during initial management at birth					
< 27 weeks	Badgernet MY2018/19	64.2%	85.6%	11/12	
27 - 30 weeks	Badgernet MY2018/19	24.6%	36.0%	11/12	
31 - 32 weeks	Badgernet MY2018/19	3.3%	9.5%	11/12	
Proportion of babies requiring cardiac compressions or adrenaline at birth					
< 27 weeks	Badgernet MY2018/19	3.7%	5.8%	7/12	
27 - 30 weeks	Badgernet MY2018/19	2.9%	2.7%	6/12	
31 - 32 weeks	Badgernet MY2018/19	2.3%	1.4%	1/12	

The network has undertaken a “Time= Brain” QI project with active therapeutic cooling equipment and training for all LNUs and SCBUs. Achieving target temperature within 6 hours has improved from 30 to >90% as a result of this initiative

We have 3 of our units who have achieved Bliss Family Centred Care gold accreditation with a further 8 receiving bronze wards. The remaining 2 units are at the self-audit/pledge of improvement stage. All units are engaged with the UNICEF baby friendly initiative and are at varying stages working jointly with maternity teams. There are units that are undertaking the Neonatal standalone accreditation. The ODN has supported funding for nurse training to aid in the implementation of this.

The GIRFT team noted that intensive care bed days were in the lower third compared nationally and that the level of activity in the network did not justify 4 NICU’s. The ODN is working with specialised commissioning as part of the NCCR to address this.

The Impact of COVID and our response

We are thankful that as neonatal services we were able to maintain neonatal critical care services during the Covid-19 pandemic. As an ODN we maintained regular communication between NHS England, NHS Improvement and our provider Trusts. The ODN attended weekly meetings with the national team, the CRG and network leads across England. This forum enabled us to share practices, highlight concerns and co-ordinate responses. National funding was made available to ensure V-create video messaging was in place across all our Trust's. This allowed for parent's to be able to see their babies by video link, during the period where access was restricted as a result of strict infection control measures being in place.

Whilst we did not experience significant risk of infection in our neonatal population, the impact on the families as a result of restricted access to neonatal units has not been underestimated. We would like to thank our nurse managers who have worked tirelessly with their individual infection prevention control teams to gradually restore parental access to our units. This will continue to be our focus in order to return to pre pandemic access for the parents and extended families. There have been some excellent examples of collaborative working within the network, sharing of guidance and operating procedures.

Our network educator Tamsyn was successful in getting an article on the impact of Covid on neonatal services published in the Specialised Medicine Journal in February 2021.This highlighted the consequences of restricted access to neonatal units. The reduction of physical contact between parents and their babies has impacted on breastfeeding rates and the overall mental health of our families.

We have also seen the impact on our medical and nursing workforce during the pandemic with the redeployment of staff to adult areas within providers. We would like to thank those staff, recognising the difficulties of working in unfamiliar environments in order to support their adult colleagues. This truly embellishes the spirit of working together.

The ODN has had a continuous oversight of activity, staffing and Covid status through daily dashboard reporting. The introduction of MS TEAMS allowed us to have regular meetings with our units to provide support on issues such PPE, swabbing, parent access and workforce. Practice was shared around standard operating procedures for the use of PPE, staff and parent swabbing. We have seen improved engagement at our ODN meetings and forums due to virtual access. Also working with all our stakeholder's has been transformed by the use of virtual team meetings

Some of the transformation both in our units and the ODN which would have taken in some cases much longer to progress has moved at a much quicker pace due to the pandemic. As we look forward there are many of the innovations which have occurred that will continue in our daily practice.

Innovations across KSS during Covid

Increased monitoring of HIE rates & ROP screening to measure any service delays due to reduced face to face contact

Production of SE COVID OPEL escalation framework; joint working with TVW

Production of SE Restoration & Recovery PID for neonatal critical care: joint working with TVW

Implementation of COVID Dashboard & Sit Rep reporting daily to ODN

Some Parent Support Groups holding virtual coffee mornings

Neonatal Outreach Teams issuing scales to families for babies with poor weight gain, parents taught to use the scales before discharge, enabled weight checks several times a week with feeding advice

SE Webinar on Hyperbilirubinaemia held due to highlighted kernicterous case in TVW. Shared learning across region.

Video meetings using TEAMS & ZOOM, networks have maintained clinical engagement throughout COVID, reduced travel for ODN team and providers.

Implementation of secure video messaging V-Create in all units to support parents during the visiting restrictions

Neonatal Outreach teams using virtual follow up after discharge, this has enabled more frequent calls where required and reduced travel for outreach teams. Some will continue using virtual follow up.

Several units have visitor registers to enable contact tracing should it be required,

Units taking parents temp & asking health questions on arrival to minimise risk and give assurance to staff and parents/parent swabbing

Joint KSS Clinical leads & managers calls during early phase of COVID

Increased contact with SE Maternity team, Maternity Networks & LMSs due to virtual meetings.

Implementation of SE Perinatal Safety Group

Most Trusts allocated Band 4 students to boost staffing levels, many worked on neonatal units and now plan to return after qualifying

ATTEND Anywhere in use by Trust medical teams, network clinical leads keen that some clinics are continued this way but those requiring face to face assessment are re-started: 2 year assessment

GIRFT reviews that were postponed being held virtually

Education

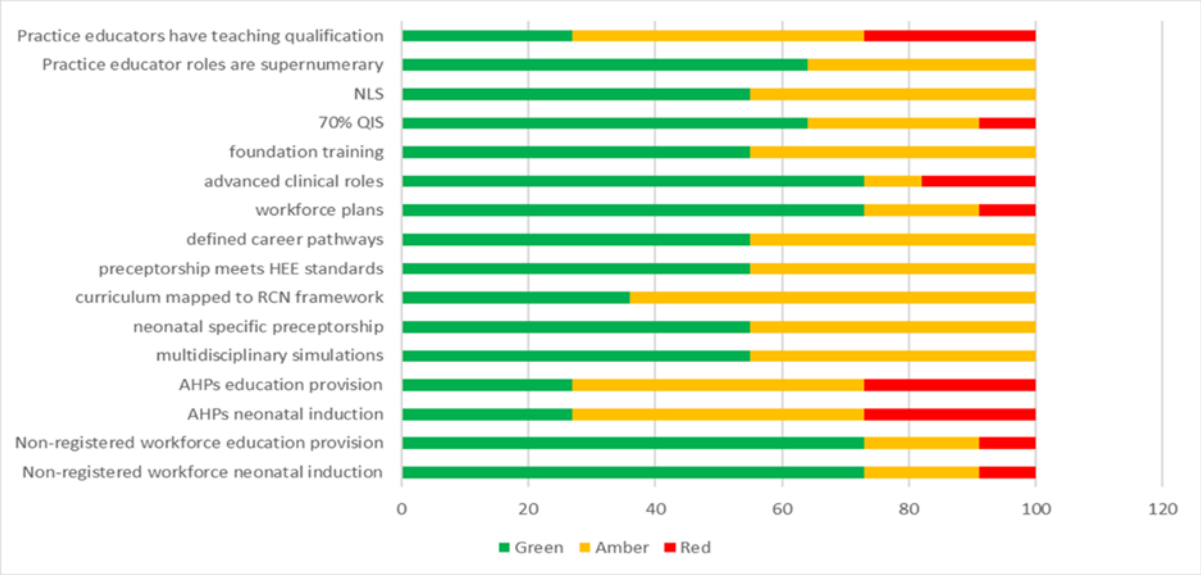
Since the commencement of the network education lead post in June 2020, a number of key pieces of work and engagement groups have been established. An initial scoping exercise was performed to discover the current status of education provision throughout all the neonatal units within the region; and a review of the education services provided by other neonatal networks nationally, to help establish our aims moving forward.

Scoping work was completed to determine:

- Current education provision of neonatal networks within KSS
- Activity, staffing and environment of units
- Forming relationships with key stakeholders
- What do KSS neonatal units want/need in terms of a preceptorship/foundation learning programme?
- What do other neonatal networks provide in terms of regional programmes?

The education provision of the 13 units within KSS was reviewed using the audit tool Standards for Excellence in Neonatal Education, which was developed from current best practice recommendations. Visits to 3 of the units within the region were conducted; unfortunately, due to the COVID19 pandemic, the remainder of the 'visits' were completed virtually through Microsoft teams.

Figure 1. Training needs of KSS neonatal units – biggest gaps (from Network education audit 2020)



The results of the education audit indicated some very clear gaps in current practice (Figure 1). Grouping these into similar areas; the training needs appear to be:

- Practice Education staffing
- Adequate numbers of trained staff in clinical skills and development training (NLS and QIS)
- Foundation and preceptorship level training
- Workforce plans; including advanced roles, career pathways, AHPs and non-registered workforce
- Multidisciplinary simulation provision
- Education provision for AHPs
- Education provision for non-registered workforce

Kent, Surrey, Sussex NEONATAL NETWORK

Annual KSS Neonatal ODN Education Day Wednesday 26th May 2021

"The Best Start"

Programme

0845-0900	Welcome and Intro	Joint Chair: Tamsyn Crane, Network Education Lead; and Dr Aung Soe, Network Clinical Lead
0900-0940	The Lollipop Man in Preterm Resuscitation	Dr Alok Sharma, Consultant Neonatologist
0940-1020	Birthday Cuddles	Gemma Finch, ANNP
1020-1100	Through a Mother's Eyes	Francesca Segal, Author of Mother Ship
1100-1120	Coffee	
1120-1200	Risky Decisions: Resuscitation at 22 weeks	Professor Dominic Wilkinson, Consultant Neonatologist and Director of Medical Ethics
1200-1240	Starting oral feeding, The SLT perspective	Alison Leonard, Highly Specialist Speech and Language Therapist
1240-1320	Maximising Maternal Breastmilk for Very Preterm Babies: Why and How	Dr Jane Lexone, NIHR Clinical Doctoral Research Fellow
1320-1400	Lunch	
1400-1440	The Importance and Practicalities of Encouraging Skin to Skin Care in Neonates	Nicole Bauwens, Neonatal Nurse Manager; Laura Angus, Developmental Therapist and Jess Hippes, Baby Carrying Educator
1440-1520	Life on the Other Side of the Curtain	Dr Ben Carter and Dr Roseanne Ives, Paediatric Registrars
1520-1600	The role of the ANNP	Jo Macleod, Senior ANNP and Joint Clinical Lead
1600-1640	Oral Presentations:	
1.	Rebecca Bailey – Delayed Cord Clamping as standard for preterm babies (a QI project)	
2.	Shweta Mulla – Holding Hands; a Peer to Peer Support Network	
3.	Tracey Tarpinan - Neonatal Saturation Monitoring - learning from incidents	
4.	Madhavudas Guru - Tracheoesophageal Fistula in a preterm infant?	
1640-1700	Close	

Poster Presentations will be on display via Teams during breaks throughout the day, as well as distributed as a document to the attendees of the day. The presentations will be recorded and available to watch after the day.

The plans for improving within these areas are as follows:

1. Network Workforce lead will look at provision of workforce within the units; including AHPs, non-registered workforce and quality roles including education.
2. Provision of a network run simulation train the trainer course will develop the practice education workforce, improve training quality for foundation level and clinical skills, and increase the delivery of multidisciplinary simulation education within the network.
3. The establishment of network working groups for Practice Educators, Simulation, and a multidisciplinary education forum.
4. Network run foundation neonatal programme for newly qualified practitioners, AHPs, non-registered workforce, junior doctors, and transitional care staff.

<u>Progress made so far:</u>

- KSS Neonatal Practice Educator group established and meeting regularly.
- 'South East Neonatal Simulation Education' (SENSE) special interest group established and meeting regularly.
- KSS ODN multidisciplinary education day 'The Best Start' to be held virtually on 26th May 2021

  Education programmes in production include virtual bereavement training from 'Bereavement Training International' and Simulation Instructor Training.KSS ODN Neonatal Foundation programme "INFuSE" will be commencing in September 2021

INFuSE (Interprofessional Neonatal Fundamentals South East)

The INFUSE programme is a network-wide, multi-professional education and support programme, designed to provide a comprehensive course of neonatal foundation learning to any healthcare professional working with infants and their families receiving neonatal care. INFUSE consists of three components:

Part 1. Preceptorship

For Newly Qualified Practitioners, to support the transition from student to competent neonatal professional. Includes action learning, peer support, a portfolio, and facilitation from an Infuse preceptor.

Part 2. Foundation Learning

Online e-learning modules providing an introduction to the foundations of neonatal care; includes chat with other Infuse students, tutorials and formative assessments of learning.

Part 3. Professional Development

Face to face training days to develop practical skills and professional behaviours. Includes simulations and workshops on clinical scenarios, human factors, leadership and quality improvement.

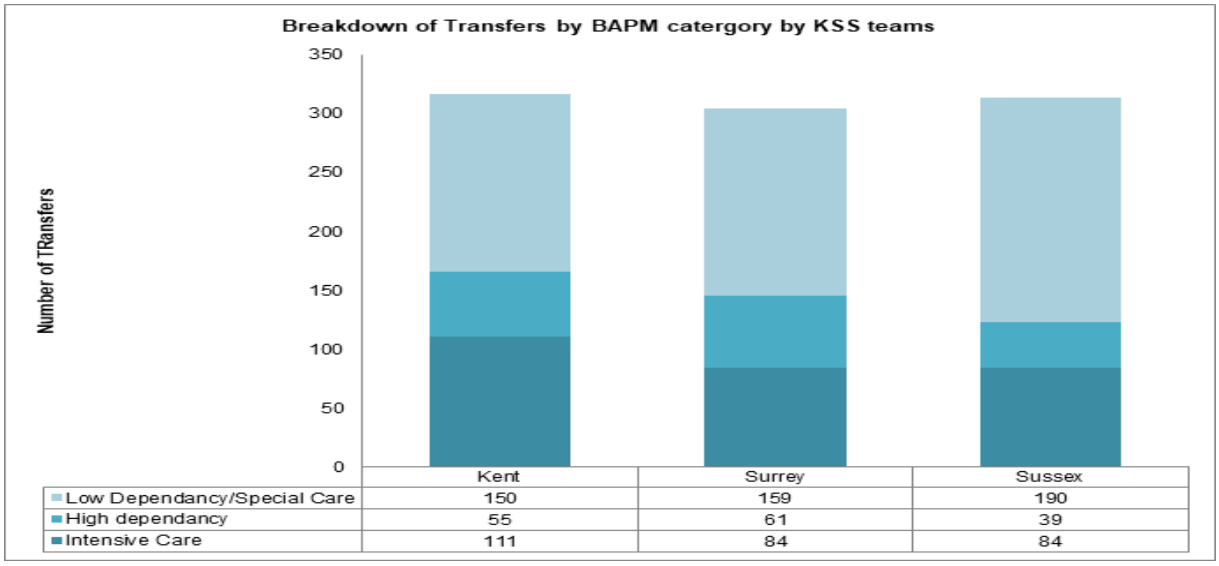
The INFuSE programme pilot commences on the Monday 20th September 2021, with 15 attendees booked from 4 units within KSS at present; 6 staff nurses, 4 nursery nurses, 1 Health Care Assistant and 3 Transitional Care Assistants

Transport Service

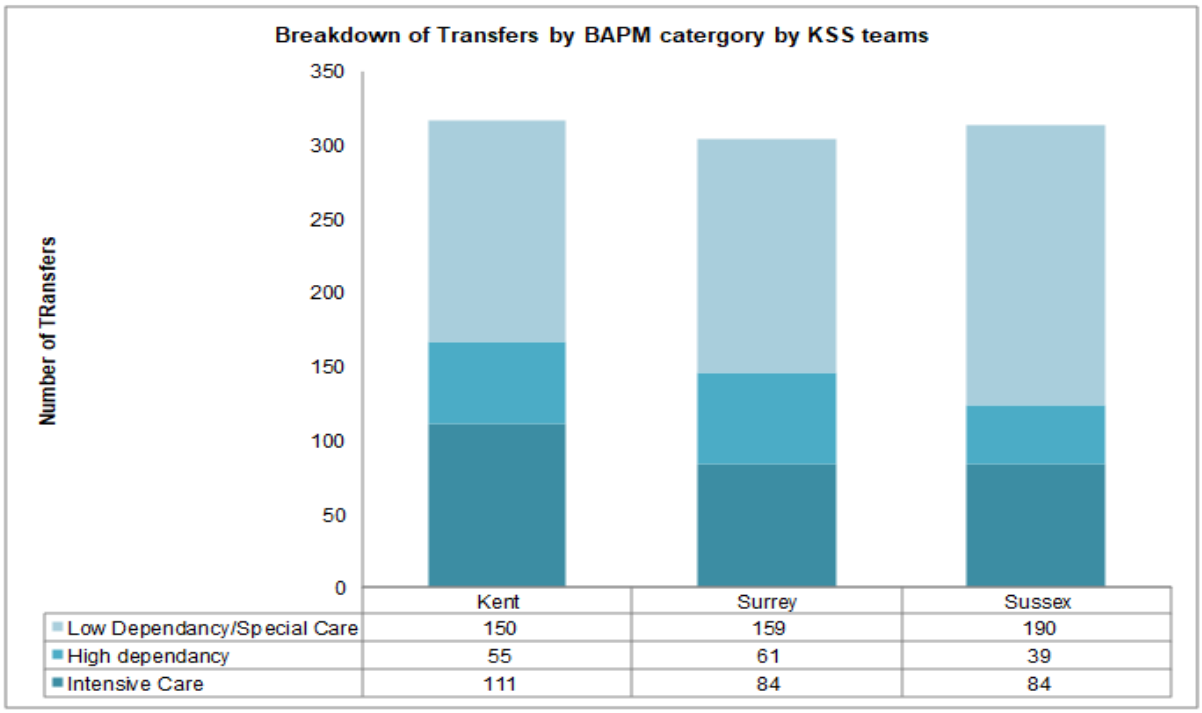
The Kent, Surrey and Sussex Neonatal Transfer Services is comprised of three separate teams which operate to cover the entire region and offers a comprehensive planned and unplanned neonatal transfer service. This enables the movement of critically ill patients 24 hours a day, 7 days a week across the region and the elective transfer of less unwell infants.

KSS NTS is one service with three teams which is co-ordinated through the Emergency Bed Service at London Ambulance Service, alongside London NTS. The two services work together and offer reciprocal cover where needed on an ad-hoc basis.

Number of Transfers by Category

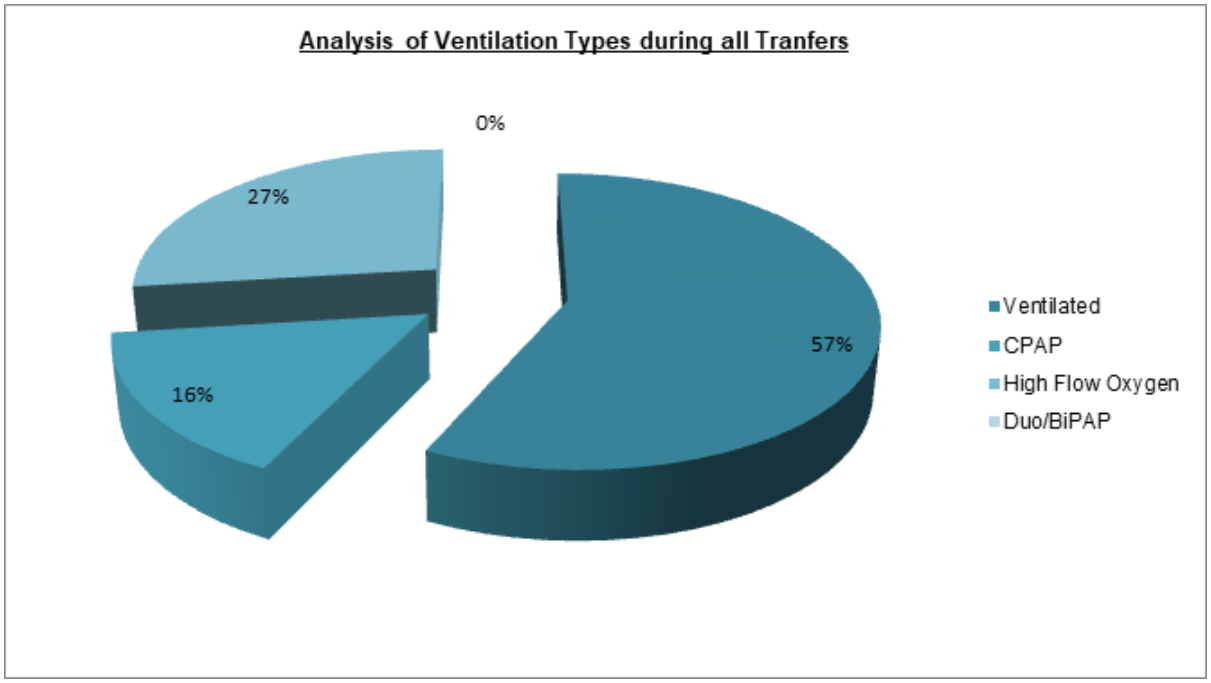


	Kent	Surrey	Sussex
Low Dependancy/Special Care	150	159	190
High dependancy	55	61	39
Intensive Care	111	84	84



	Kent	Surrey	Sussex
Low Dependancy/Special Care	150	159	190
High dependancy	55	61	39
Intensive Care	111	84	84

Total number of transfers this year has reduced in relation to all transfer years to 2015. This is thought to be a reflection of reduced activity in NICUs across the region during the SARS Cov-2 pandemic. This reduction was distributed fairly evenly across the three teams within the region.



These proportions of respiratory support are similar to previous years.

Analysis of Cooling Received

Team	Cooling Received	Cooling and Ventilated	33-34 Target Temp Reached	Target Temp Reached by 6hrs	Cooling pC02 <4 on Completion of Transfer
Surrey	12	6	12	12	1
Kent	13	9	13	6	1
Sussex	10	6	10	10	0
Grand Total	**35**	**21**	**35**	**28**	**2**

There were less cooling transfer overall in this fiscal year. This is thought to be secondary to an overall reduction in activity.

Operational reason for transfer by Gestation (<72hrs from birth)

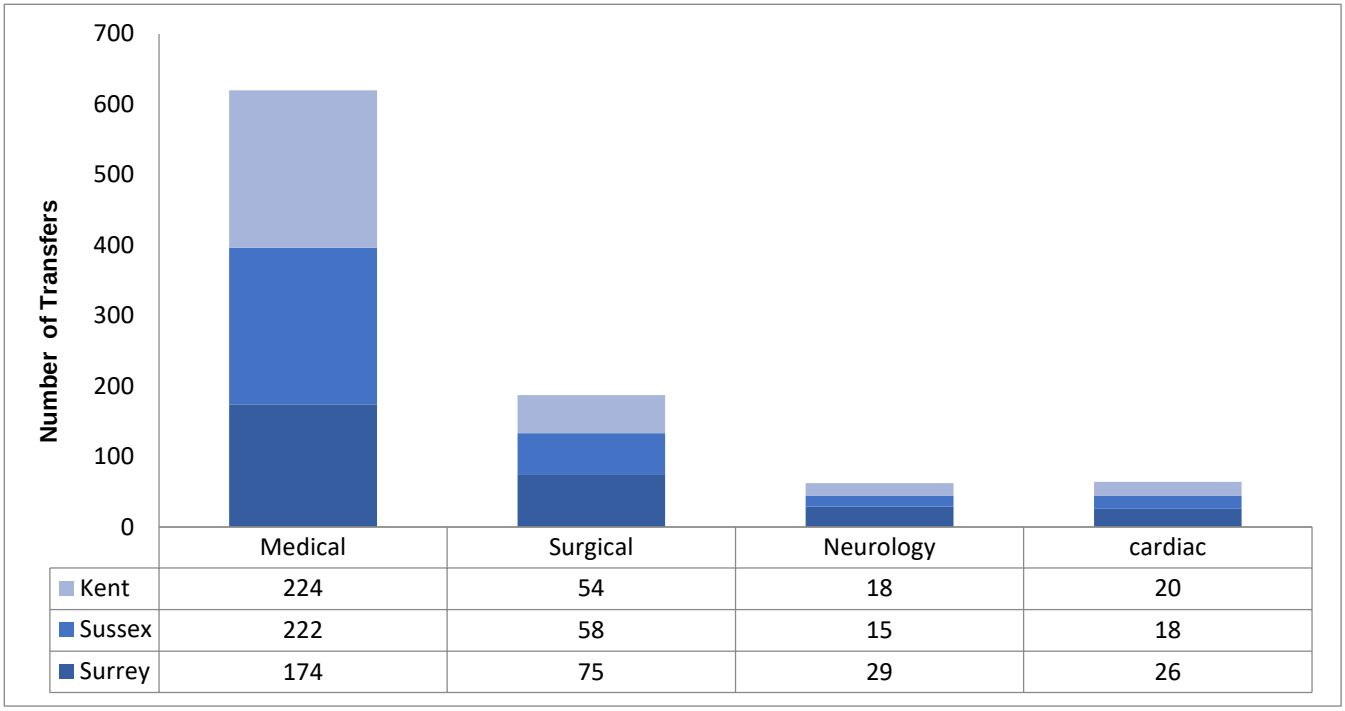
Team	Gestation	Uplift	Resources/Capacity	Repatriation	Outpatients
Surrey	23+0 – 26+6	4	0	0	0
	27+0 – 31+6	15	0	1	0
	32+0 – 34+6	7	1	3	0
Surrey Total		**26**	**1**	**4**	**0**
Sussex	23+0 – 26+6	7	0	0	0
	27+0 – 31+6	14	0	0	0
	32+0 – 34+6	4	2	0	0
Sussex Total		**25**	**2**	**0**	**0**
Kent	23+0 – 26+6	9	0	0	0
	27+0 – 31+6	17	1	1	0
	32+0 – 34+6	13	1	2	0
Kent Total		**39**	**2**	**3**	**0**
Grand Total		**90**	**4**	**7**	**0**

Analysis of Intensive Care journeys completed for babies requiring surgical care 2020/2021

		Receiving Network					
Transport Team	**Referring Network**	Kent	Surrey	Sussex	London	Out of Region	**Total**
Kent	Kent	0	0	2	15	0	**17**
	Surrey	0	0	1	5	0	**6**
	Sussex	0	0	0	1	0	**1**
	London	0	0	0	0	0	**0**
	Out of Region	0	0	0	0	0	**0**
Kent Total		**0**	**0**	**3**	**21**	**0**	**24**
Surrey	Kent	0	0	0	8	0	**8**
	Surrey	0	0	1	4	0	**5**
	Sussex	0	0	0	0	0	**0**
	London	0	0	0	2	0	**2**
	Out of Region	0	0	0	0	0	**0**
Surrey Total		**0**	**0**	**1**	**14**	**0**	**15**
Sussex	Kent	0	0	2	6	0	**8**
	Surrey	0	0	0	0	0	**0**
	Sussex	0	0	1	1	0	**2**
	London	0	0	0	1	0	**1**
	Out of Region	0	0	0	0	0	**0**
Sussex Total		**0**	**0**	**3**	**8**	**0**	**11**
Grand Total		**0**	**0**	**7**	**43**	**0**	**50**

Overall surgical transfer numbers were similar to previous years. However, the proportion of surgical intensive care transfers was reduced, it is not clear why this is the case.

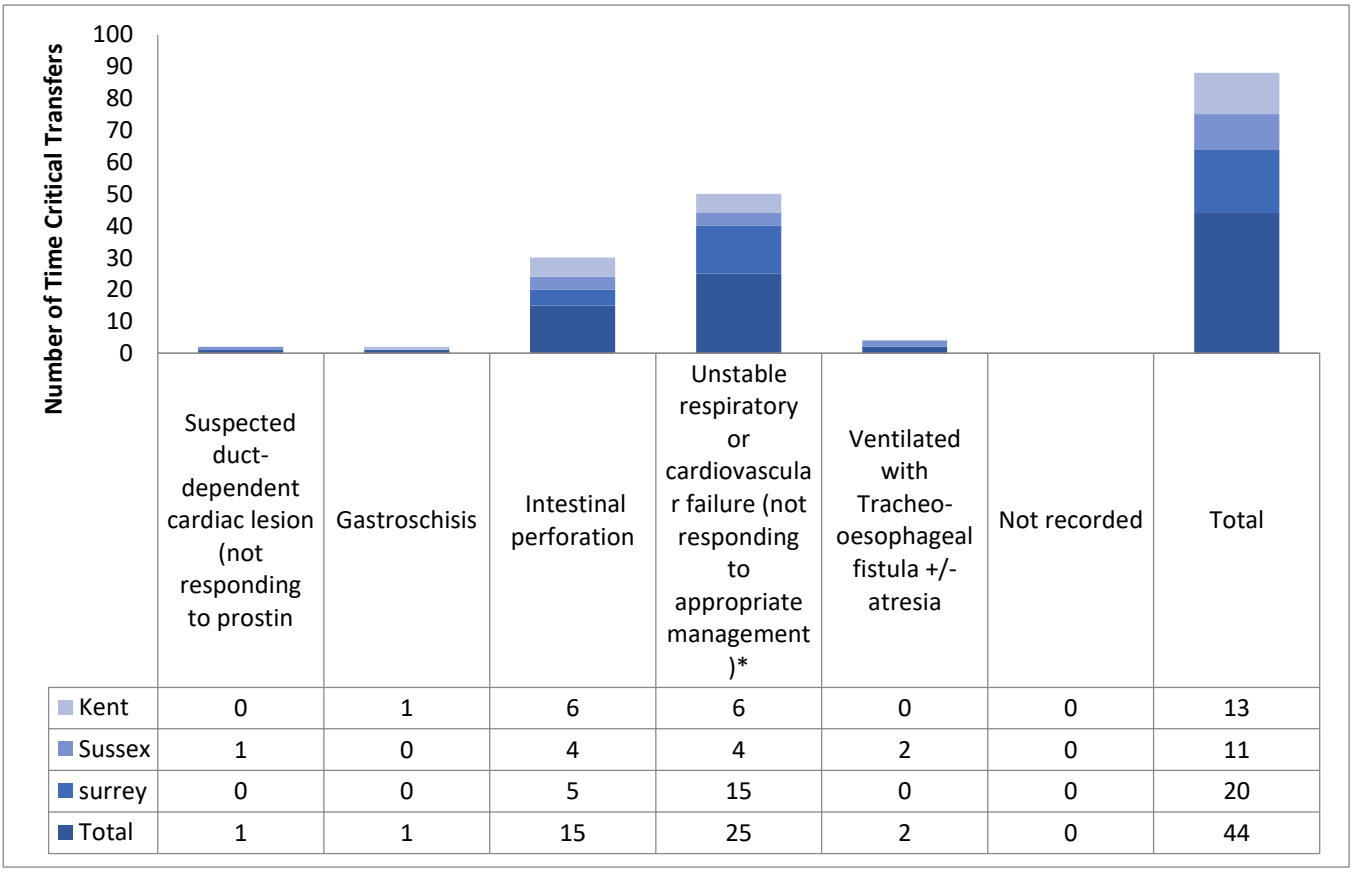
Clinical Reason for Transfer



	Medical	Surgical	Neurology	cardiac
Kent	224	54	18	20
Sussex	222	58	15	18
Surrey	174	75	29	26

Time Critical Transfers

Reasons and numbers of time critical transfers are similar to previous years.



	Suspected duct-dependent cardiac lesion (not responding to prostin	Gastroschisis	Intestinal perforation	Unstable respiratory or cardiovascular failure (not responding to appropriate management)*	Ventilated with Tracheo-oesophageal fistula +/- atresia	Not recorded	Total
Kent	0	1	6	6	0	0	13
Sussex	1	0	4	4	2	0	11
surrey	0	0	5	15	0	0	20
Total	1	1	15	25	2	0	44

Patient Safety Incidents (PSI)

All adverse events and near misses are reported either as NTS Patient Safety Incidents (PSI) or as Trust DATIX. All incidents are reviewed by NTS lead nurse and Consultant and presented at the quarterly NTS meetings with the ODN. Learning and any changes in practice are shared.
There are no significant incidences (SI), major harms or never events to report for this period.

Plans for the future

- Reconfiguration of equipment and ambulances to provide HFOV (high frequency oscillatory ventilation) and HFNC (high flow nasal cannula) across all three transport teams. This requires modification of all transport teams equipment and ambulance modifications.
- Review of all protocols planned for 2021, both operational and clinical.
- Long term staffing issues in relation to medical and ANNP cover remain and efforts to improve recruitment of registrar and ANNPs are underway.

Key Achievements and Developments.

During the last 12months we have seen an incredible strain on Neonatal Critical Care across the ODN, although the level of activity has been low the workforce in our units have been redeployed to provide mutual aid to adult services during the pandemic. Despite these challenges the ODN has continued to deliver high quality safe care to our babies across the network.

The network was without a full time manager for 13 months. Successful recruitment has enabled us to expand the ODN team, with a full time network manager, new posts in education, administrative support and Lead nurse roles.

Following GIRFT recommendations the ODN has developed network guideline groups with good engagement from our providers. Good examples of MDT working with pharmacists and dieticians is demonstrated in the development and implementation of network wide Parenteral Nutrition with best practice guidance. Further newly established special interest groups are in place for practice educators, ANNP's, Research, neonatal simulation, nutrition and neonatal Outreach.

National funding from the LTP enabled us to recruit to network care co ordinator roles to support the enhanced family experience aspect of the NCCR. Alongside this we have established an ODN Parent Advisory Group (PAG) to work with us on co production of our services and development as an ODN.

The ODN held its first webinar on Optimal Cord Management in November and this was well attended by the network and our obstetric/midwifery colleagues.

In March we held our first network mortality meeting where there was the opportunity to review our infant mortality and share learning across the ODN. We have been forging links with the CDOP leads across KSS and had representation for the first time at our meeting.

We have also continued quarterly virtual Clinical Governance meetings where we have seen good engagement from our provider Trusts despite their individual operational pressures.

Our network clinical forums have successfully continued to run throughout COVID and have increased in frequency, to bi monthly. We have experienced higher attendance numbers due to the facilitation MS Teams.

As an ODN we have a host of other developments for the incoming year. We have a planned network education day in May and the commencement of our neonatal preceptorship programme in September. We continue to work with our maternity clinical networks and look forward to the 4 Local Maternity Systems evolving into Local Maternity and Neonatal systems where we will have the forums to truly integrate our work programmes and develop perinatal pathways. We will be heavily engaged with QI work collaboratively with the Academic Health Science Network, MatNeo group and the LMS. Projects which are being taken forward include Optimal Cord management and Right Place of Birth. Through the recently established KSS research group we will be participating in an international research study on Family Integrated Care. We will continue to work with our guideline groups to deliver evidence based practice guidelines to support our provider units. Other quality and safety work includes the implementation of specialist external reviewers for PMRT as recommended by the Ockenden report; we are working closely with maternity on this. We have also seen the emergence of observational attachments taking place between our SCU, LNU's and our tertiary units as recommended by the report. One of our other key safety aims aims is to have all of our 13 units across KSS implement Pulse Oximetry screening of the newborn to detect Congenital Heart disease, we have seen good engagement with this and have 9 of our units already undertaking with 2 confirmed to start in July/September.

As the ODN model evolves, we have the opportunity to reinforce existing and forge new relationships with commissioners, ICS's, provider Trusts and other bodies in order to promote strategies which deliver excellent and consistent care for all our infants. We will continue to work closely with our neighbouring TVW Neonatal ODN, and paediatric critical care colleagues supporting integrated pathways of care for those with serious congenital conditions from antenatal detection through fetal medicine and care through infancy and beyond.