Suffolk and North East Essex Maternity and Neonatal Services

NHS East Suffolk and North Essex NHS Foundation Trust

ESNEFT ATAIN and TC Quarterly Report

Q1 2023-24

April- June 2023

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The ATAIN Programme: Background

NHS Suffolk and North East Essex

In 2017, NHS England identified that over 20% of admissions of full term babies to neonatal units could be avoided. By providing services and staffing models that keep mother and baby together we can reduce the harm caused by separation.

Maternity and neonatal services need to work together to identify babies whose separation could be avoided, and to promote understanding of the importance of keeping mothers and babies together when it is safe to do so.

Why is this so important?

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, and 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.

NHS England

The ATAIN Programme

NHS Suffolk and North East Essex

The ATAIN programme was widely introduced in 2018, and forms part of what is now known as the Maternity and Neonatal Safety Improvement programme (MatNeoSIP).

The focus is on babies who are admitted for four key reasons, as these are the areas that NHS England believe can have the most impact:

- Respiratory conditions
- Hypoglycaemia
- Jaundice
- Asphyxia (perinatal hypoxia-ischaemia)

Data is collected and reviewed on a monthly basis as a minimum, by a multi-disciplinary team which includes:

- Midwifery
- Obstetric
- Neonatal / Paediatric
- Neonatal Nursing

There is often lots of useful incidental learning identified when cases are reviewed, but the focus of the programme is to:

- Identify quality improvement work that could reduce causes of harm that can lead to term babies needing to be admitted to a neonatal unit
- Provide evidence to support the development of services that keep mothers and babies together when it is safe to do so

Neonatal hypoglycaemia: learning from claims | ADC Fetal & Neonatal Edition (bmj.com)

Term admissions to neonatal units in England: a role for transitional care? A retrospective cohort study | BMJ Open

Transitional Care (TC)

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The British Association of Perinatal Medicine (BAPM) published a Framework for Neonatal Transitional Care in 2017. This document describes the ideal provision of care to keep separation of mothers and babies at a minimum. The Trust continues to develop our TC services to work towards meeting these standards as far as resources and staffing allow.

The NHS Resolution Maternity incentive scheme requires evidence and assurance that transitional care services are in place to minimise separation of mothers and babies. Current pathways of care into TC have been jointly approved by maternity and neonatal teams with a focus on minimising separation of mothers and babies.

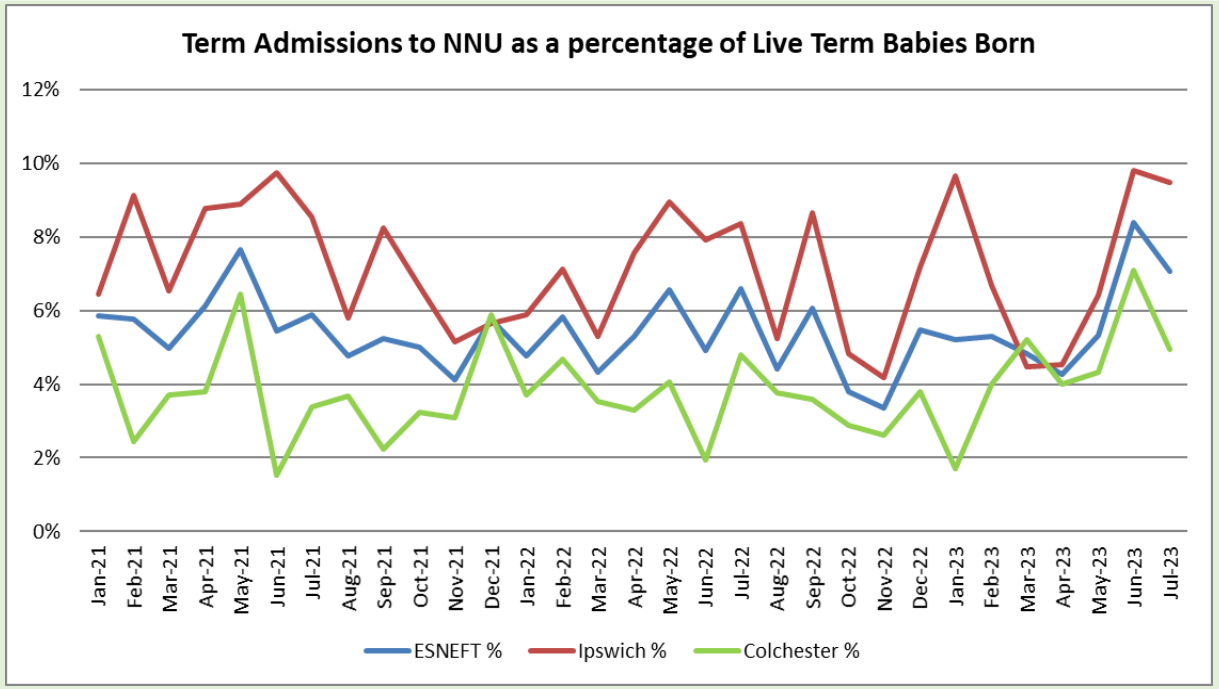
This report provides evidence to meet the requirements of Safety Action 3 as follows:

- Audit of activity in Transitional Care over the past quarter.
- The summary provided within this report is based on the data recorded and reviewed frequently (at least every month) by our multi-disciplinary ATAIN group.
- This includes data about all preterm and term TC activity, as well as term admissions and all term attendances on the Neonatal Unit.
- An action plan is kept updated to address the ongoing findings of the ATAIN group. This separate document will be shared along with this report. A summary of progress within the last quarter can be found within this report.

British Association of Perinatal Medicine (hubble-live-assets.s3.amazonaws.com)

Term admission data – ESNEFT summary

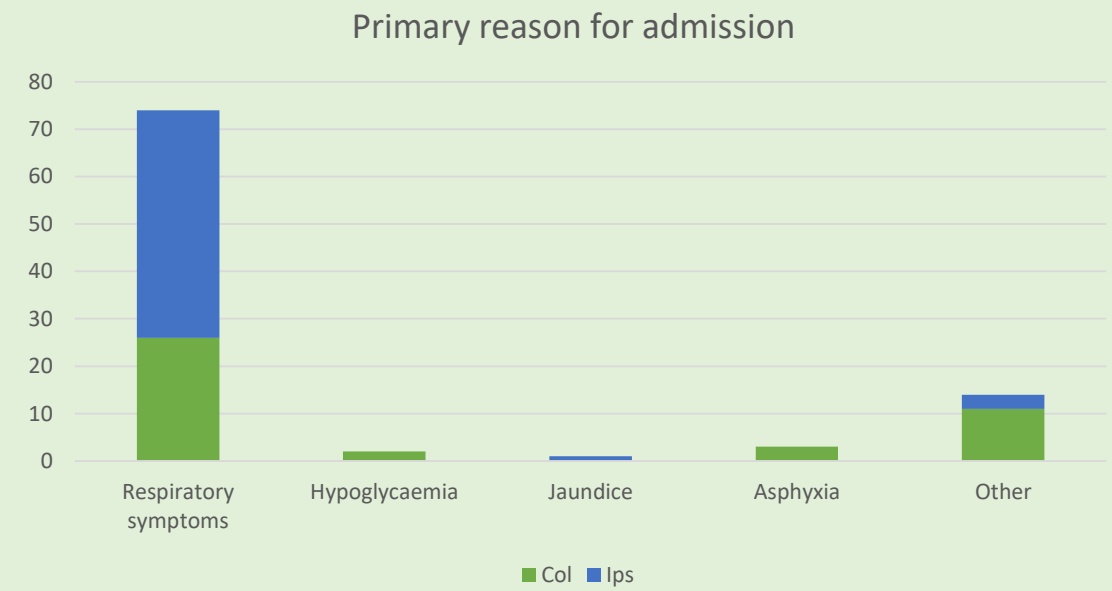
Term admission rate (target <6%)



Across ESNEFT, there were 94 term admissions to NNU in Q1 of 2023-24 which equates to 5.73% of all livebirths. This compares to 70 admissions in Q4 of 2022-23 at 4.51%. June demonstrated the highest amount of admissions for both sites within Q1. This report summarises the reviews of all the cases in order to identify any themes and to extract learning to reduce the number of term admissions to NNU going forward.

BadgerNet data continues to be scrutinised and corrected as required to ensure reportable data is accurate.

Reasons for admission



Respiratory symptoms was the most common primary reason for admission which accounted for 78.7% of cases.

It has been recognised that there is no guidance to define criteria for each of the categories. This has led to ambiguity in allocating the primary reason for admission resulting in potentially differing categorisation across both sites.
Collaboration needs take place across both sites and with the LMNS to agree criteria for each ATAIN category. This will ensure that the case reviews are consistent and can truly inform improvements in care.

Suffolk and North East Essex Maternity and Neonatal Services

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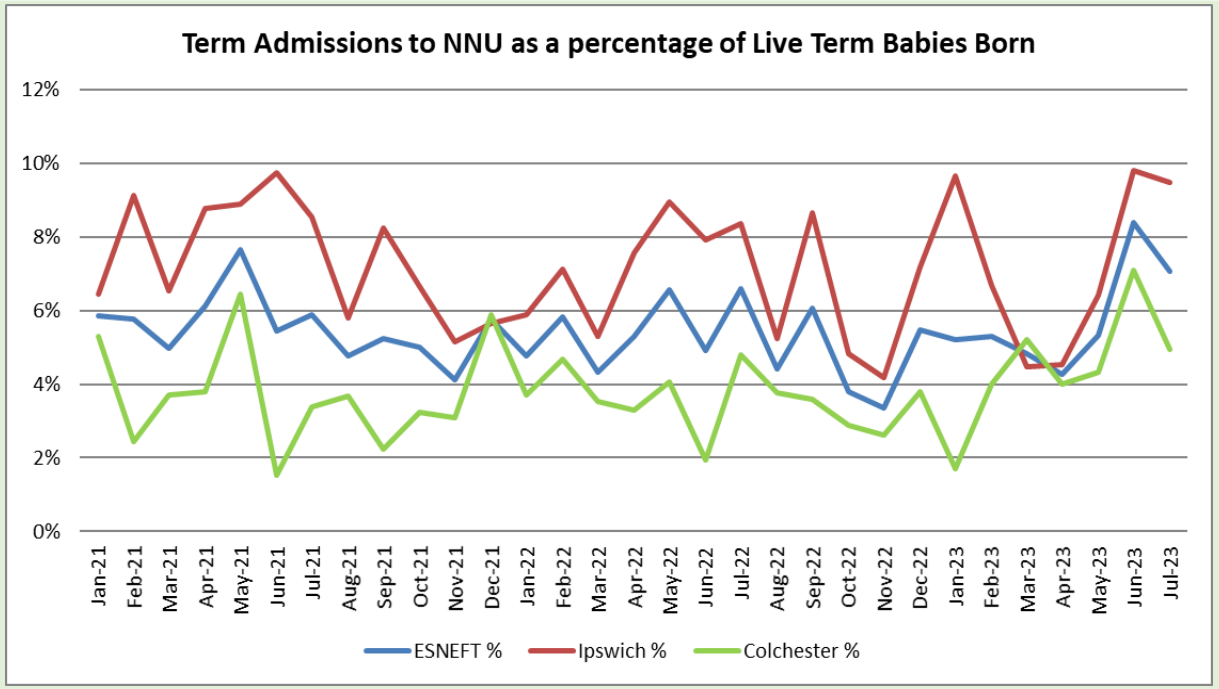
Colchester ATAIN and TC Progress Report

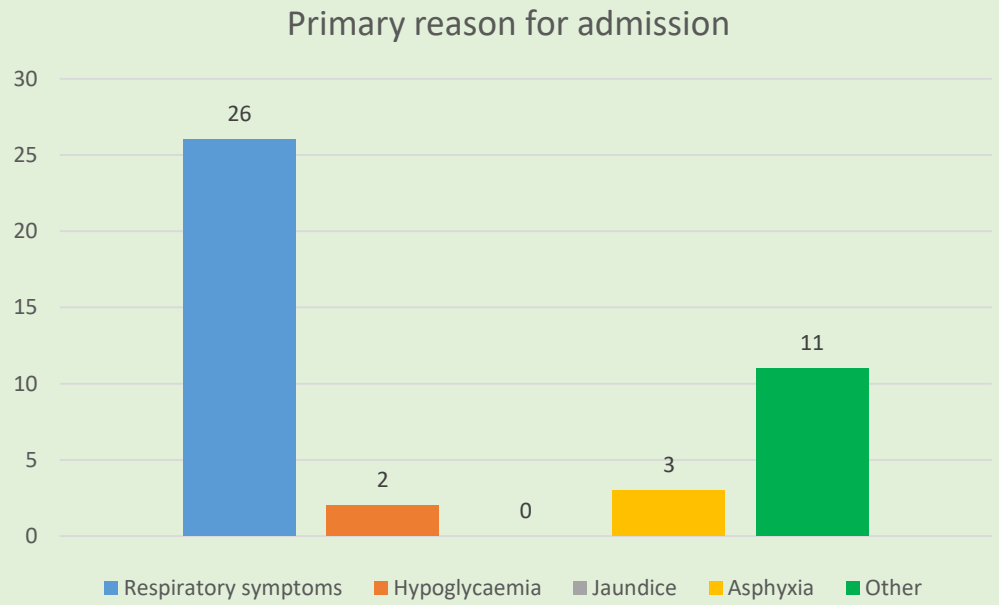
Colchester - Term admission data

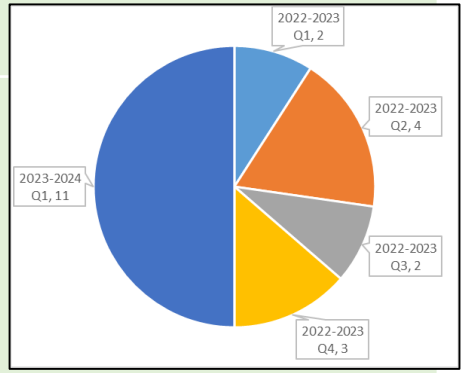
Term admission rate (target <6%)



There were 42 term admissions to NNU in Q1 of 2023-24 compared to 26 in Q4 of 2022-23 with June experiencing almost double the usual monthly rate.
The number of term admissions to NNU increased above the 6% target in June, the first time since May 2021 for Colchester Maternity.

Reasons for admission





Respiratory symptoms was the most common primary reason for admission which accounted for 61.9% of cases.
There has been an increase in admissions under the category of 'other' with 11 cases this quarter; there were 11 cases in total for year 2022-2023.

Colchester - Learning from the review of term admissions to NNU

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Respiratory symptoms

26 babies admitted with respiratory symptoms in Q1

- 23 of which were also treated for suspected sepsis in addition to managing the respiratory symptoms. 6 of these babies were confirmed as septic with a further 5 as likely but not confirmed and 12 were negative and IV antibiotics were discontinued appropriately.
- 23 of the babies admitted with respiratory symptoms required O^2 therapy
- 4 babies with respiratory symptoms were born by category 4 CS, 3 of which were birthed prior to the recommended 39th week. All 3 had clinically valid reasons; 1x rRFM, 1x reduced growth trajectory, 1x multiple fibroids in lower segment (2 consultants agreed early CS to avoid the risk of labour and emergency CS).

Learning extracted

- Good practice point – early frenulotomy was arranged on NNU for a baby with a recognised tongue-tie who was feeding poorly (NGT). Feeding improved following procedure.
- 'Dropped' baby not reviewed by neonatal team within recommended time period, reminder to be shared with staff.

Actions

- CTGs identified as useful to learning used for facilitating teaching in Tuesday Case Review and cases identified for wider learning used for presentation and discussion at MDT PM&M
- Datix category of harm is reviewed and upgraded to at least moderate harm for cases where care issues may have contributed to the admission
- Staff reminded of the dropped baby policy; for neonatal review within 15 mins, admit to NNU for 24 hours of observation, submit a Datix

Colchester - Learning from the review of term admissions to NNU

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Hypoglycaemia

2 babies admitted with hypoglycaemia as the primary reason for admission in Q1

Learning extracted	Actions taken
• Improvements in the quality and quantity of AN information to parents whose babies are at risk of hypoglycaemia may help inform parents and prepare them for the potential need for admission to NNU • Correct pathways of care are being followed yet babies are still requiring admission to NNU with hypoglycaemia; current guidance needs to be reviewed to see where improvements can be made	• **Existing ATAIN action to review the pathway of immediate care of babies born to diabetic mothers in order to promote early and sufficient feeds including the option of giving EBM in theatre.** • **To implement the updated BAPM Hypoglycaemia guidance once published**

Colchester - Learning from the review of term admissions to NNU

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Asphyxia (perinatal hypoxia-ischaemia)

3 babies admitted to NNU under the category of asphyxia

Learning extracted	Actions
• Conflicting NICE guidance on the target contraction frequency when oxytocin infusion is administered; Intrapartum Care guideline aims for 4-5:10 yet Fetal Monitoring guideline states 5:10 is too frequent and action must be taken to reduce frequency.	• National guidance reviewed and local guideline amended to aim for contraction frequency 3-4:10 and to take action to reduce frequency if 5:10 – shared with staff

Colchester - Learning from the review of term admissions to NNU

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Other

11 babies admitted to NNU under the category of 'other' in Q4

2 babies required CFM following unusual movements, one related to maternal use of benzodiazepine (NAS scored) and one had no cause found and a follow-up arranged.

Cold babies

In April, there were 2 term babies admitted to NNU with persistent low temperatures despite efforts to warm them on the PN ward. In addition, there were 2 other babies that attended NNU as ward attenders who were both cold. These cases occurred within a small time frame which was recognised by the DS Matron. Estates Dept. was contacted and it transpires the hospital target central heating temperature had just reduced the by 1°. In total in Q1 there were 4 term admissions with an admission temperature below target range.

There has been a significant increase in admissions for congenital anomalies:

Congenital Anomaly	No.
Renal pelvic dilatation (significant)	2
Cleft lip/palate	2
Cardiac (Tetralogy of Fallot, Transposition of the great arteries)	2
Total Anomalous Venous Drainage x1 under Respiratory category)	1
Trisomy 21 (antenatally undetected)	1

6x were detected in the AN period with appropriate pathways followed, tertiary referrals completed where required, plans made and documented and supportive information given to parents.

Learning extracted

- No formal process in place to ensure parents are informed of paediatric plans that are made in the AN period, to have the opportunity to discuss them and to be offered a tour NNU if appropriate
- To improve the data recording process for ward attenders to ensure themes can be captured such as hypothermia.
- Possible theme with cold babies requiring deeper dive.

Actions

- New ATAIN action: to ensure paediatric plans made in the AN period are discussed with parents with the opportunity to visit NNU where appropriate.
- ATAIN spreadsheet updated to include column for temperature for ward attender babies.
- New ATAIN action: Focused information to be shared with staff on the importance of thermoregulation
- New ATAIN action: to undertake a thematic review of cold babies

Colchester - Term Admission data informing TC improvements

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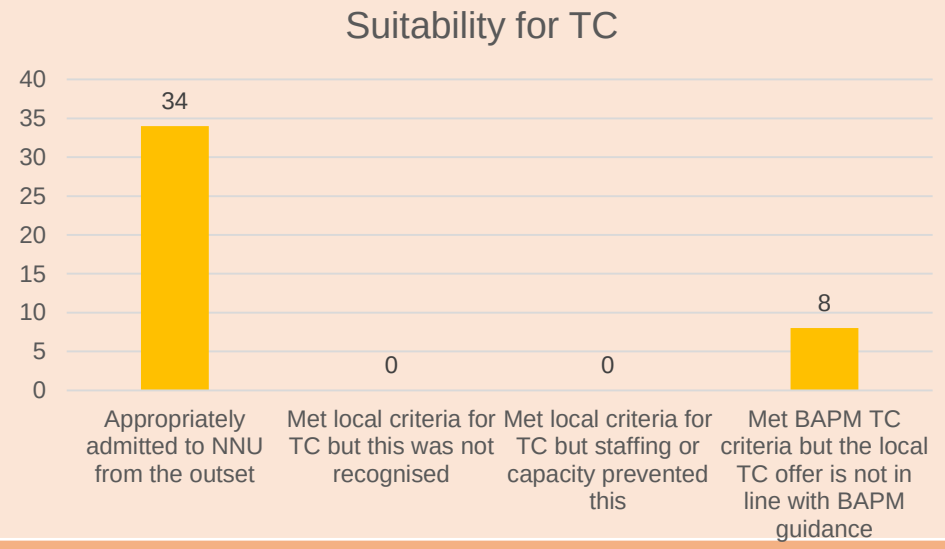
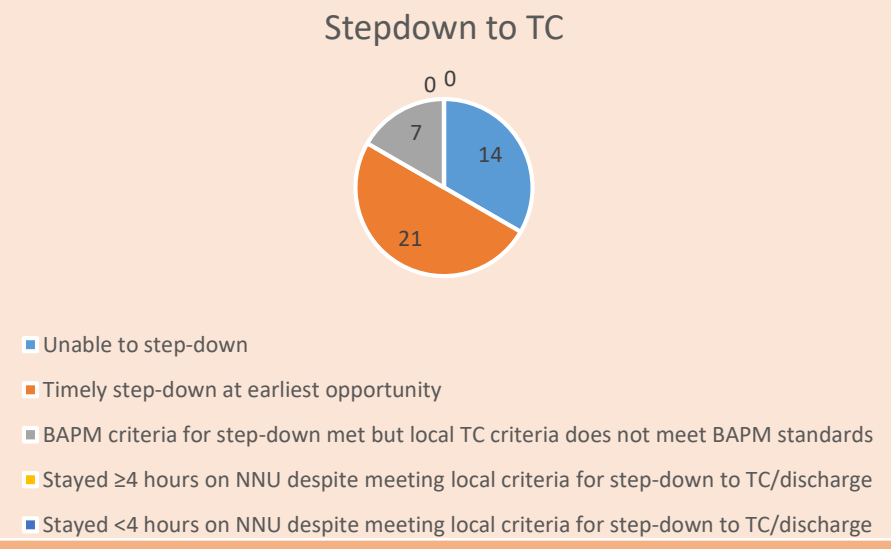
Suitability for TC



Step-down



Summary

Of the 42 term admissions to NNU throughout Q1, all were appropriate admissions from the outset however it is important to acknowledge that 8 babies met the BAPM TC admission criteria which Colchester does not currently offer in full.
21 babies were stepped down to TC at the earliest opportunity with 0 babies remaining in NNU despite meeting local criteria for TC on the PN ward; this is an improvement from the 4 babies last quarter that could have been stepped down earlier. 5 babies had NGT which delayed step-down.

Overall: 32 term admissions were unavoidable. 8 were avoidable as care could have been provided in a TC with BAPM criteria, 2 were avoidable as care issues were identified which likely contributed to the admission (19% avoidable cases).

Colchester - Auditing pathways into Transitional Care

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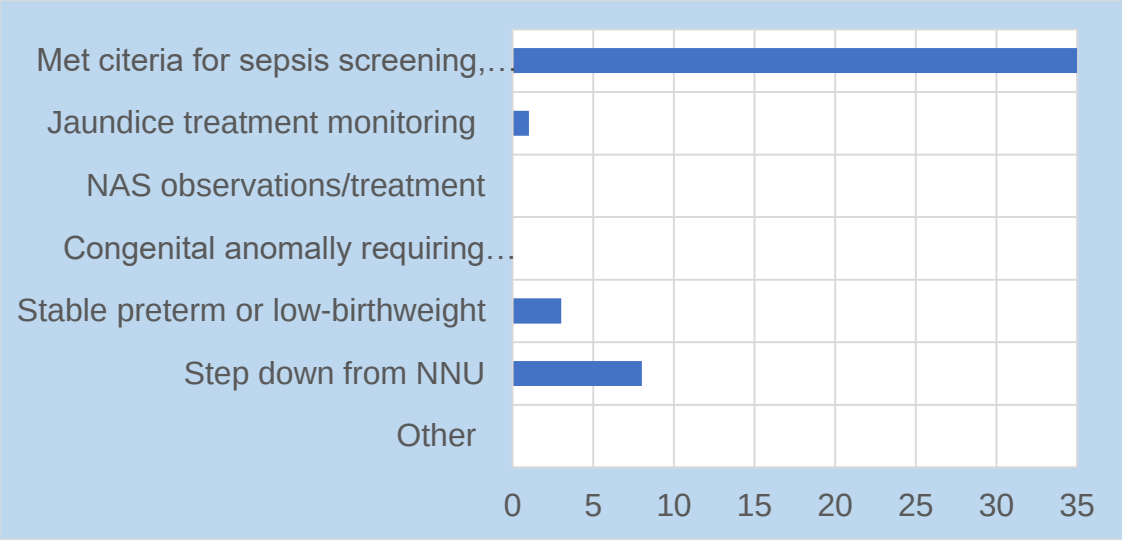
Transitional care activity summary

Primary reasons for admission to TC Quarter 1



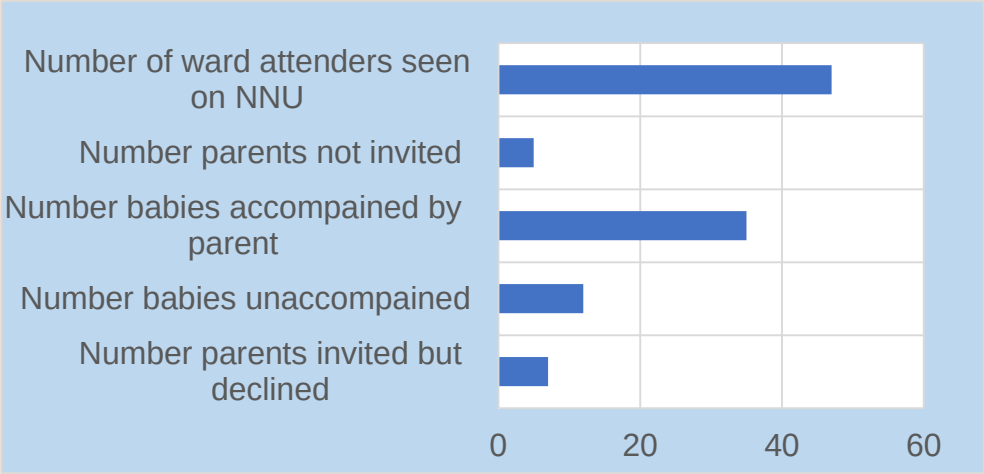
- Following feedback from Lexden ward the Virtual transitional care guideline has been amended to include bleep holder/Lexden shift lead discussion at the safety huddle when planning TC care provision for babies >35 week >1800g. If CDS/Lexden ward unable to accommodate due to staffing, plan for NNU to provide care if staffing and acuity allows.
- Following feedback from Lexden staff, a care pathway for blood glucose monitoring for babies 35-367+6 weeks gestation has been devised to complement the ICP
- Meeting criteria for sepsis screening and clinically stable remains the primary reason for admission to TC.
- Babies have to visit NNU for partial septic screens, cannula insertion and first dose of antibiotics before returning to virtual TC with mum on postnatal ward.

Colchester - Learning from ward attender / TC data

Suffolk and North East Essex

Term ward attenders

Separation data ward attenders to NNU



Reducing separation of mothers and babies

- We've seen an improvement in ward attenders who were accompanied by mum, partner or other. We should invite every mother to accompany their baby this is not always possible due the babies having to visit NNU for the initial review.
- 47 ward attenders were seen on the unit in Q1
- 35 were accompanied by parent.
- 12 were unaccompanied, 7 of these babies parents were invited but declined. 5 were not invited.
- Midwives continue to check antibiotics with the neonatal nurses on the PN ward. NNU were regularly having to send two trained staff to check antibiotics no second checker available, due to Lexden staffing pressures. Lexden RNs have now completed the second checker training, to address this issue.

How could we improve TC locally?

- Colchester does not meet the BAPM TC criteria, we continue to offer virtual transitional care on the postnatal ward at the mother's bedside.
- In order to align with BAPM recommendations, the service must create a dedicated space for TC and invest in neonatal staffing who can provide care for babies from 34 weeks requiring NGT feeds, septic screens, cannulation, lumbar punctures, ECGs, NAS observations/treatment.
- Emma Hart ESNEFT Neonatal Matron in post, Emma is leading on the Transitional care business case.
- Transitional care task and finish group planned for 24th August.

Colchester - Progress with the ATAIN action plan

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Summary of progress

- The current ATAIN Action Plan is submitted alongside this Quarterly Report.
- The Action Plan is monitored and overseen by the Inpatient Matron.
- 3 new ATAIN actions identified this quarter:
    - to ensure paediatric plans made in the AN period are discussed with parents with the opportunity to visit NNU where appropriate.
    - focused information to be shared with staff on the importance of thermoregulation
    - To undertake a thematic review of cold babies
- 1 closed action this quarter of implementing the updated maternal sepsis tool which includes pyrexia in labour as a trigger.

Suffolk and North East Essex Maternity and Neonatal Services

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Ipswich ATAIN and TC Progress Report

Ipswich - Term Admission data

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History

Admissions have been falling steadily since ATAIN was introduced in 2017:

- 2017-18: 14.1% of all babies born
- 2018-19: 11.9%
- 2019-20: 8.6%
- 2021: 6.8%
- 2022: 5.85% yearly total

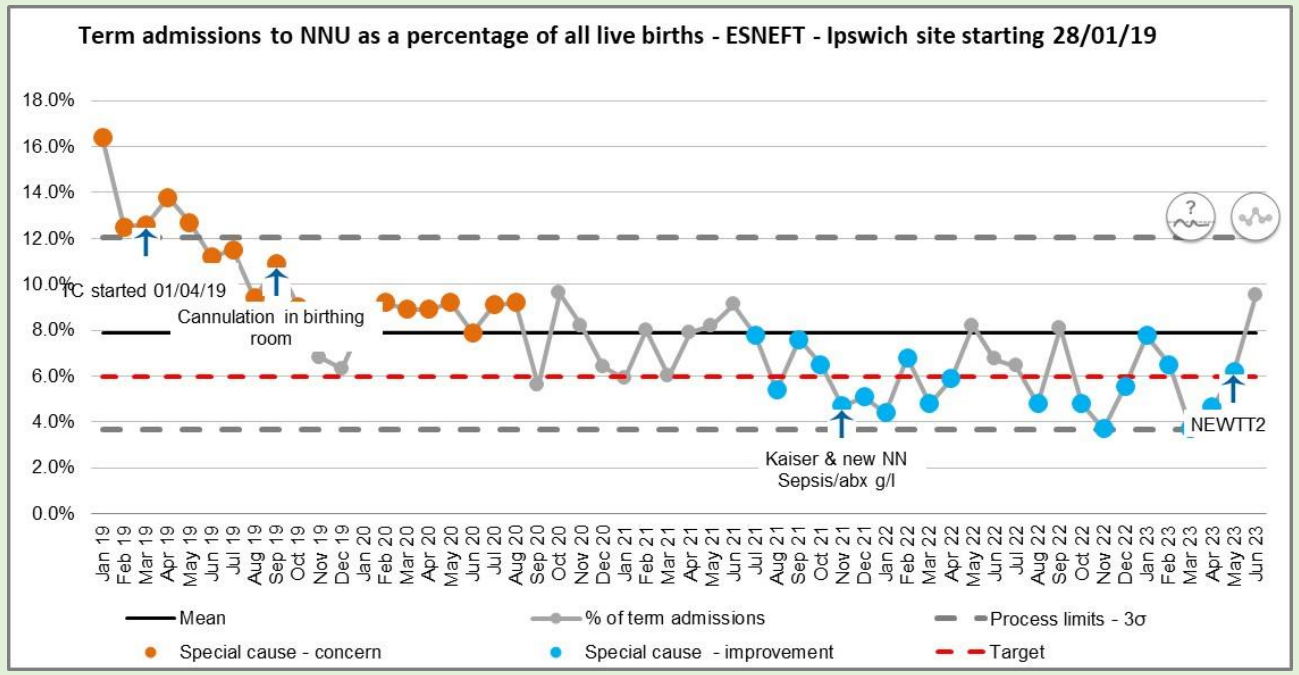
- **2023: 6.4% year to date**

For this particular period however, April - June 2023, there has been a slight increase:

- 52 babies in total were admitted to the NNU, **6.7%** of the 773 total deliveries:
  - April: 11 babies, 4.6% of deliveries
  - May: 16 babies (5.9%)
  - June: 25 babies (9.5%)

**NB 4 cases are still awaiting obstetric consultant revew. Any learning from these will be shared in the Q2 report.*

Term Admission Rate (target <6%)



This chart shows the percentage of all live births admitted to NNU. The chart shows a downwards trend which is then maintained at an average monthly rate of approximately 6%. BadgerNet data will continue to be scrutinised and corrected as required to ensure reportable data is accurate.

Ipswich – Reasons for Admission

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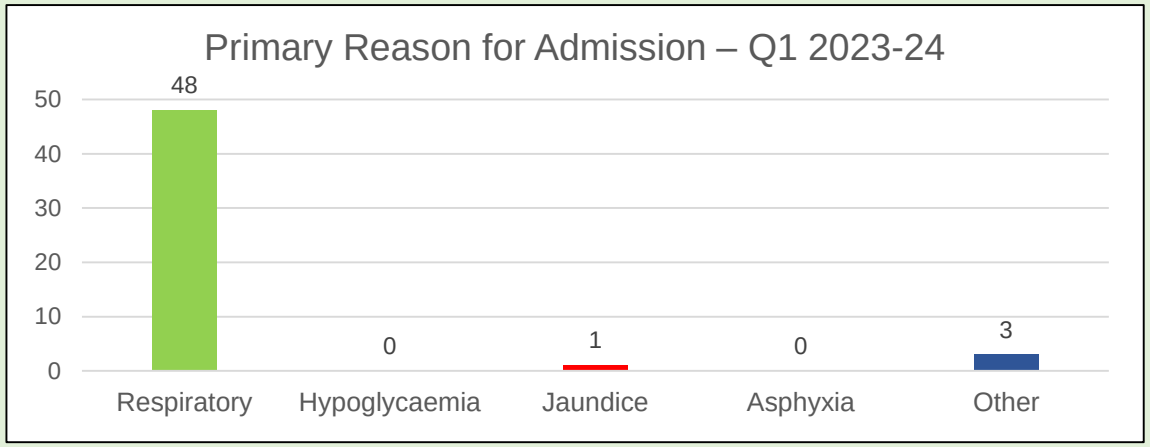
Reasons for admission



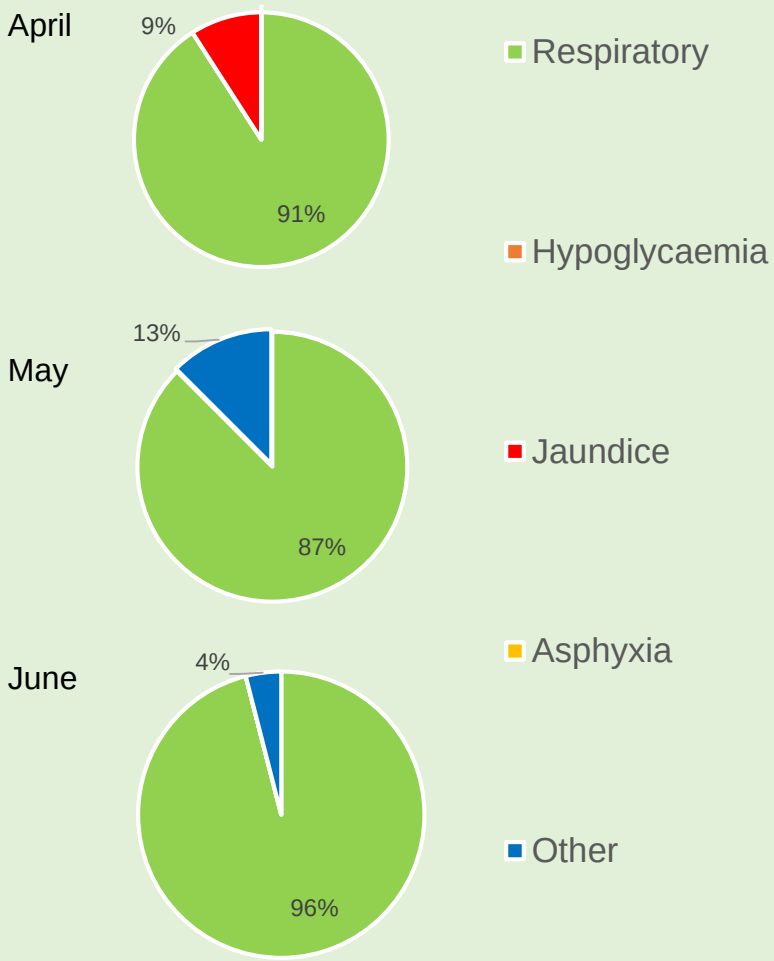
- *Respiratory symptoms was the most common primary reason for admission, accounting for **92%** of cases.*

June saw a particularly high number of term admissions – **9.5%** - the highest rate since 2020.

It has been suggested that this rise is an annual occurrence, possibly due to the hot weather and temperature management within the unit.
Looking at babies' responses to this, only four babies had abnormal temperatures at birth (one borderline 37.5º, three at 38.0º). Four babies had abnormal temperatures on admission: hypothermia x1 (36.4º) and pyrexia x 3 (37.6º, 38.2º and 38.7º). Only two babies had pyrexia both at birth and on admission therefore this appears to be unlikely to be a contributory factor to the high rate.

Another theory is that the hot weather contributes to earlier exhaustion in labour, in turn making labours longer and/or less efficient and increasing the stress on the fetus. Compared to the earlier three months, June had a slightly higher rate of intervention-based birth for NNU admissions (instrumentals and LSCS categories 1-3): a total of 52% vs 45%, 46% and 37% for March April and May respectively), suggesting that this might have some significance. Further examination of this will be made as we continue to monotor the data for the following quarter, which also covers the summer months.

Monthly breakdown



Ipswich - Learning from the review of term admissions to NNU

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Respiratory symptoms

38 (92%) babies admitted with respiratory symptoms in Q1

- 7 cases (13%) – ELCS. All but one of these were <39/40, all with valid clinical reasons for ELCS prior to 39/40. However only one of these had documented evidence of counselling regarding antenatal steroids.
  - Audit to be commenced exploring incidences of NNU admission for babies born by ELCS <39/40, their reasons for admission, and whether steroids were offered and/or administered.
- 17 cases (45%) were also treated for suspected sepsis in addition to managing the respiratory symptoms.
- 34 (89%) of the babies admitted with respiratory symptoms required O^2 therapy

Learning extracted

- Good practice seen in the recognition of tachypnoea in a 'green' baby
- Blood gases not always taken when appropriate i.e. with a pathological CTG, if the baby appears in good condition
- Noted – large number of cases transferred in from another closed unit – often complicated cases which can be more difficult to assess with unfamiliar notes. However difficult to select patients if other unit is closed.

Actions

- Audit into ELCS <39/40 and admission to NNU
- Reminders to staff via staff newsletters re: gases to be taken for all pathological CTGs / overshoots on CTG as a non reassuring sign / ensure clinician who reviews/cares for patient documents their care in the notes / to follow the hypothermia flowchart in the neonatal ICP / to document if CTG not picking up FH (e.g. if disconnected to go OTT)

Ipswich - Learning from the review of term admissions to NNU

Suffolk and North East Essex

Jaundice	
1 baby was admitted with jaundice in Q1:	
Learning extracted	**Actions taken**
	• Nil

Ipswich - Learning from the review of term admissions to NNU

NHS Suffolk and North East Essex

Hypoglycaemia

No babies were admitted to NNU under the category of hypoglycaemia in Q1

Asphyxia (perinatal hypoxia-ischaemia)

No babies were admitted to NNU under the category of asphyxia in Q1,
However one case admitted under respiratory reasons was suspected to have HIE:

Learning Extracted	Actions
TBC following outcome of ELR	TBC following outcome of ELR

Ipswich - Learning from the review of term admissions to NNU

NHS Suffolk and North East Essex

Other
3 babies admitted to NNU under the category of 'other' in Q1:

Learning extracted	Actions
• To encourage escalation if clinician not happy with outcome of review and concerns regarding wellbeing of mother or fetus. • CTG interpretation – for further education around this.	• CTG training continues and face to face study day has been implemented recently (in addition to K2 e-learning) providing opportunity for group discussion. CTG review sessions open to all staff continue, reviewing recent CTGs

Ipswich - Auditing pathways into Transitional Care

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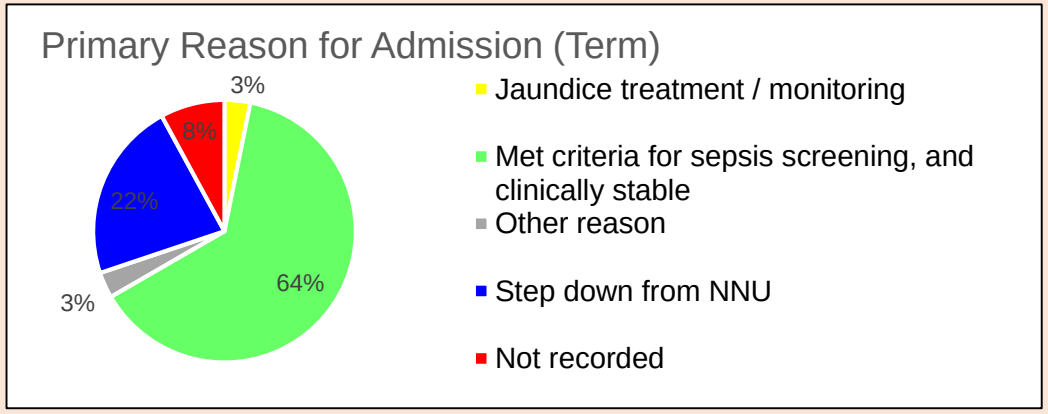
Transitional Care activity summary

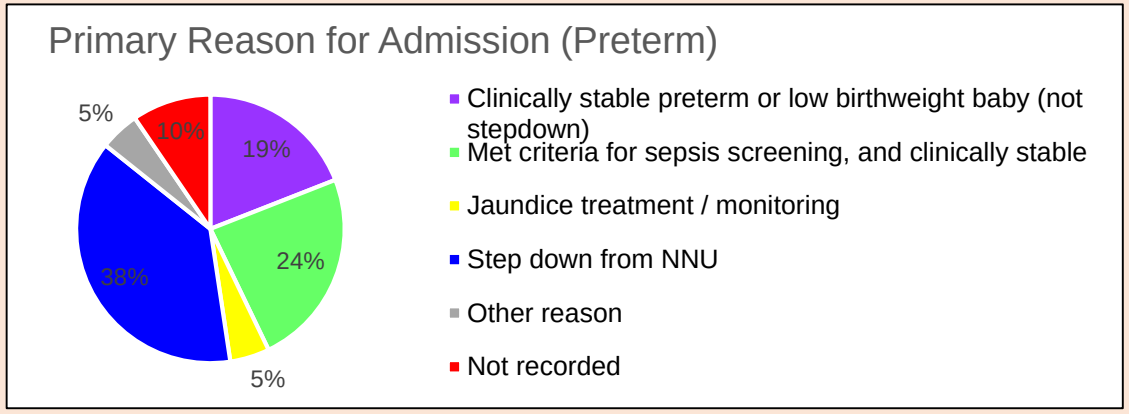
Term TC

63 term babies recorded as admitted into TC during Q1.
Of those, majority (64%) for sepsis screening.
37 cared for on the PN ward, 24 on the NNU, 2 data not available



Pre Term TC (34 - 36+6 weeks)

21 pre term babies recorded as admitted into TC during Q1.
Of those, majority (38%) for sepsis screening
11 cared for on the PN ward, 10 on the NNU



- Meeting Criteria for Sepsis Screening and Step Down from NNU remain the primary reasons for admission to TC
- 10 term babies (19%) could have been stepped down to TC from the NNU sooner than they were, of which:
  - 4 babies could have been stepped down sooner but were not (no reason given)
  - Parents of one baby declined TC care
  - 3 babies were cared for primarily by their mother who was resident on the NNU and so there was minimal separation
  - 2 babies were cared for by their mother in the parent bay so were effectively TC, just not documented as such
- Communications to be made to staff to encourage step down and documentation of such at earliest possible time.

Ipswich - Learning from ward attender / TC data

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Term ward attenders

April : 6 ward attenders all requiring 4 Limb BP and saturations, from PNW.
4 parents accompanied 2 did not.

May : 4 attenders. 1 For Blood gas, 1 for NG insertion and x-ray, 1 for 4Limb B/P and Pre/Post saturation monitoring, 1 for septic screen. All from PNW and all accompanied by parent.

June : 2 attenders : 1 Community baby for SBR, 1 for Cranial Ultra sound scan from PNW both accompanied by parents.
If TC was managed by TC Neonatal Nurses and Band 6 Neonatal trained QIS Nurse then these could be overseen on PNW.

How could we improve TC locally?

To meet BAPM TC standards we need to:

- TC business plan being evolved to involve patient/staff input to change this service.
- To explore staffing models to use to implement TC service.
- To secure financial budget for separate service.
- To compile TC guidelines/policies/pathways to ensure BAPM criteria is met.
- To ensure service is safe for neonates and mothers with appropriately trained Neonatal staff.

Ipswich - ATAIN action plan

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Summary of progress

Ongoing:

- Discordance in figures reported to regional teams due to BadgerNet recording – work continues to align data entry, review and data submission, with monthly communication and sharing of data to ensure the same data is shared.
- Ongoing discussions regarding offer of corticosteroid where appropriate – audit to take place considering the impact in change in practice around steroid administration in 37-38+6 ELCS, and to compare those cases where babies were admitted with those who were not despite early term LSCS.
- Work within the NNU to ensure baby's details on BadgerNet are a true reflection of the care they are under so that our raw data is valid– i.e. NNU or TC. NNU lead nurses to remind staff via the huddle, and through communication and documentation prompts.
- To examine possible reasons for higher numbers in hotter months, and to monitor admission rates throughout the next (summertime) quarter.

Completed:

- May 23 – NEWTT2 neonatal observations implemented. Feedback was welcomed and acted upon where possible. Audit now in place to assess compliance with the new system and to highlight any areas for improvement, as well as to provide feedback to the LMNS and other trusts looking to introduce the system.
- LMNS shared learning day attended by MDT maternity and neonatal Staff
- Reminders to staff via staff newsletters re:
    - Gases to be taken for all pathological CTGS
    - Overshoots on CTG as a non reassuring sign
    - Ensure clinician who reviews/cares for patient documents their care in the notes
    - To follow the hypothermia flowchart in the neonatal ICP
    - To document if CTG not picking up FH (e.g. OTT)

Current Action Plan is shared with this document