RCPCH Audits

National Neonatal Audit Programme

A guide to the 2025 audit measures

August 2025

NNAP
National Neonatal Audit Programme

RCPCH
Royal College of Paediatrics and Child Health
Leading the way in Children's Health

HQIP
Healthcare Quality Improvement Partnership

National Neonatal Audit Programme (NNAP): A guide to the 2025 audit measures

The NNAP is run by the Royal College of Paediatrics and Child Health (RCPCH) and commissioned by the Healthcare Quality Improvement Partnership (HQIP) as part of the National Clinical Audit and Patient Outcomes Programme (NCAPOP). More information about the Programme can be found at: www.rcpch.ac.uk/nnap

This document sets out the details of the 2025 NNAP audit measures and describes the following details for each measure:

- NNAP audit measure
- Changes to the audit measure for 2024 data
- NNAP standard and source of standard
- Inclusion criteria
- Attributing results
- Deriving outcomes
- Where the required data should be entered on BadgerNet

Version control table

Version	Publication date	Comments
V1.0	June 2025	Version 1.0 published
V1.1	August 2025	Minor correction to p56. Update to guidance relating to antenatal steroid data entry.

Contents

About the NNAP dataset and methodology

The RCPCH receives the data contained in the NNAP dataset directly from System C, provider of the BadgerNet clinical system. The NNAP team processes data that is required solely for care quality and service improvement in relation to the aims and scope of the NNAP. Neonatal unit staff enter data onto the BadgerNet platform as part of routine care whilst a baby is present on the neonatal unit and this data is stored by System C. Data items contained within the NNAP dataset are synchronised to an NNAP database hosted by the RCPCH. Patient identifiable data is pseudonymised before analysis is conducted by the NNAP team. The RCPCH has approval to receive patient identifiable data without consent for England and Wales under Healthcare Research Authority (HRA) Confidentiality Advisory Group (CAG) Section 251 support (ref: 21/CAG/0007), for Scotland under the Health and Social Care Public Benefit and Privacy Panel (HSC-PBPP) support (ref: 2122-0254), and for the Isle of Man as approved by the Isle of Man Dept. of Health and Social Care and Information Commissioner.

NNAP data dictionary

The NNAP dataset is defined in the NNAP data dictionary, the most recent version is available at: https://www.rcpch.ac.uk/work-we-do/clinical-audits/nnap/data-flow

Inclusion criteria

The following inclusion criteria apply to all NNAP measures:

- Babies who were admitted to a neonatal unit for neonatal care (not including babies that only had transitional care, observational or postnatal ward care)
- Babies born at a gestational age of 22 weeks or more
- Babies who had care provided by an NNAP unit
- Babies whose parents or carers have not opted them out of secondary use of their data for the purpose of the NNAP*

Further criteria specific to each audit measure can be found in the measure descriptions.

** The National Data Opt Out (which allows patients in England to opt out of their information being used for purposes beyond their direct care) does not apply to the National Neonatal Audit Programme. This is because applying the National Data Opt Out would introduce biases to the data and jeopardise patient safety. A patient can still be opted out from the NNAP via a project specific mechanism. For more information, please see: https://www.rcpch.ac.uk/resources/national-neonatal-audit-programme-privacy-notices-your-babys-information*

Case ascertainment

In usual practice, every baby admitted to a participating neonatal unit is entered on the BadgerNet patient record system and is eligible for inclusion in the NNAP; the audit therefore expects to achieve 100% case ascertainment in the participating organisations, excluding babies whose parents have chosen to opt them out of secondary use of their data for the purposes of the NNAP. Babies receiving special care in transitional care areas or postnatal wards can also be entered, but it is known that some units do not enter data for such babies and for this reason measures exclude babies who do not spend any time on a neonatal unit.

Data collection period

The cohort of babies included in the 2025 audit year are babies who are either born, experience their first neonatal admission, final neonatal discharge or turn 44 weeks post menstrual age (PMA) in the calendar year 1 January 2025 to 31 December 2025, depending on the measure. The exception to this is the dataset used for two-year follow-up, the cohorts for which are set out in the measure description.

Describing gestational age

Gestation refers to "completed weeks" of gestation, based on the best available estimate recorded by clinical staff in BadgerNet. Gestation is typically described in bands – where we refer to all babies born at less than 32 weeks, we mean all babies with a gestation at birth of up to 31 weeks and six days inclusive. Where we refer to 23-33 weeks inclusive, we mean to include all babies with a gestation at birth of 23 weeks and 0 days to babies with a gestation at birth of 33 weeks and 6 days.

Two measures of age are used within the NNAP audit, corrected age and post-menstrual age. When describing post-menstrual age of babies, we mean the chronological age of the baby plus gestation at birth. Corrected age of babies is defined as chronological age minus prematurity at birth. For example, a baby born at 32^{+0} weeks gestational age is 8 weeks premature, at 9 weeks of life, this baby would have a post-menstrual age of 41 weeks and a corrected age of 1 week post term.

1 Mortality to discharge in very preterm babies

Does a baby born between 24 weeks' and 31 weeks' gestational age inclusive die before discharge home, or 44 weeks' post-menstrual age (whichever occurs sooner)?

Note: Babies discharged to a hospice for palliative care (such as for compassionate extubation) and who die prior to 44 weeks' postmenstrual age are counted in the numerator.

Change to the audit measure for 2025 data year: None.

- From 2023, the NNAP additionally reported mortality at 22 and 23 weeks gestational age, however this group will not be included in reporting against the improvement goal.
- From 2023, the NNAP began reporting report mortality on 1 year epochs. Previously the NNAP reported three-year rolling epochs.

NNAP standard

Developmental standard: None

Subject to outlier identification: *No.*

Comparison standard for outlier analysis: N/A

Inclusion criteria

Number of babies admitted to a neonatal unit whose birth gestation was 24 to 31 weeks' inclusive (22 weeks and 23 weeks for additional reporting).

Denominator: Number of babies admitted to a neonatal unit whose birth gestation was 24 to 31 weeks' inclusive. Babies who are recorded as having died, but who do not have a recorded date of death, will not be included, and are recorded as missing.

Numerator: Deaths of babies 24 to 31 weeks' gestation inclusive, before discharge from hospital to home, or discharge for palliative care with agreed non-intervention plan in place followed by death prior to 44 weeks post-menstrual age (e.g. ventilated baby discharged to a hospice). In hospital, deaths in units not submitting data to the NNAP will be included. Mortality at or after 44 weeks postmenstrual age will be excluded.

Cohort: Babies who turned (or would have turned) 44 weeks PMA in the calendar year of interest.

Attribution

The NNAP will report mortality on 1-year epochs. Attribution will be to network of birth. When the place of birth is listed as *Home* or *Transit*, place of birth will be assigned to the Network related to the unit of first admission.

Deriving outcomes

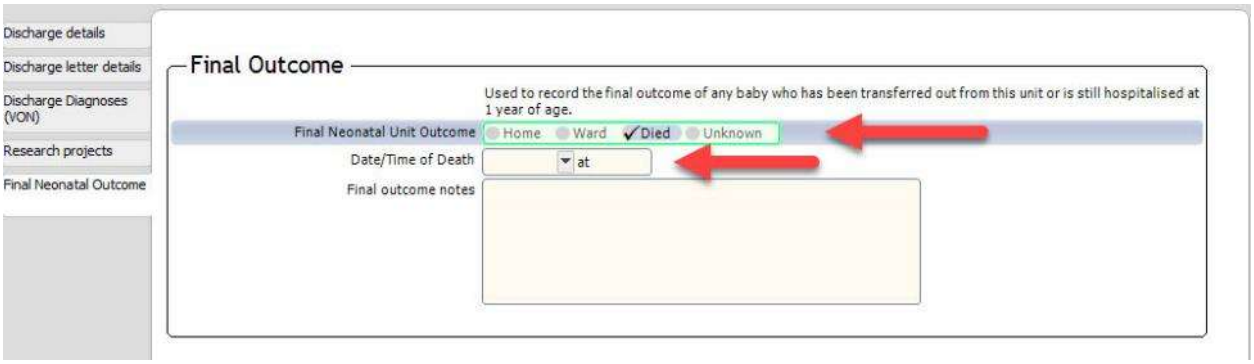
Raw national and network mortality rates will be published alongside network treatment effects. No data is published for individual units.

Case mix adjustment: For limited variables, including gestation, gender, multiplicity and ethnicity but neither antenatal steroid administration nor congenital anomalies.

BadgerNet data source

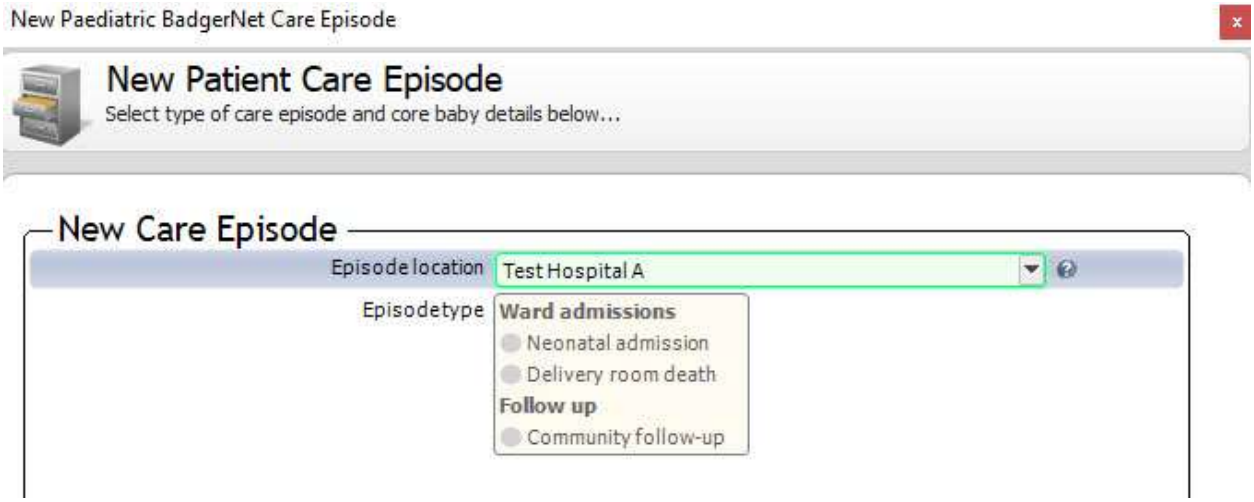
Use the *Final Neonatal Outcome* page to record deaths that occur at non-NNAP units, along with the date and time of death. Please ensure that you click save and close to ensure that any outcomes recorded by another unit using BadgerNet but not participating in the NNAP are recorded.

Figure 1: Final Neonatal Outcome page, BadgerNet.



The NNAP mortality analysis will only include babies admitted to neonatal units, in the first instance. However, we would like units to report liveborn but not admitted deaths using BadgerNet at gestations down to, and including, 22 weeks. Only the briefest of details are required to complete a "delivery room death" admission in place of a "neonatal unit admission".

Figure 2: New Care Episode, BadgerNet



Additional information

Rationale

Mortality is a vitally important outcome of neonatal care: reporting adds to the NNAP's perspective on neonatal services. The NNAP reports on mortality to discharge of admitted babies. This definition may facilitate quality improvement of care within the neonatal unit.

2 Optimal perinatal care composite metric

Does a baby born at less than 34 weeks gestational age receive all reported perinatal optimisation measures (appropriate to their gestational age at birth)?

Change to the audit metric for the 2025 data year: None.

- This was a new metric in 2023 derived from existing individual measures already reported by the NNAP. No additional data collection.

NNAP standard

Developmental standard: None, initially benchmarking only for the new metric.

Subject to outlier identification: *No.*

Comparison standard for outlier analysis: *N/A*

Inclusion criteria

Number of babies admitted to a neonatal unit whose birth gestation is between 22 and 33 weeks inclusive. For multiple births, each baby will be included. Babies will be measured against each of the measures for which they are eligible, (based on e.g. gestational age) this means that some babies will not be measured against all six measures.

Denominator: Number of babies admitted to a neonatal unit whose birth gestation is between 22 and 33 weeks inclusive and who have either:

- recorded outcomes for all the component measures for which they are eligible or;
- have at least one non-adherent outcome.

Numerator: Number of babies admitted to a neonatal unit whose birth gestation is between 22 and 33 weeks inclusive and who are adherent for all the component measures for which they are eligible.

Cohort: Babies who experienced their first neonatal admission in the calendar year of analysis.

Attribution

Results will be reported for each hospital of birth and network of birth.

When the place of birth is listed as *Home* or *Transit* the hospital and network will be assigned as the provider of their earliest episode. When the place of birth is the site of a closed unit known to be within a network, the hospital will be assigned as *Other* and the network will be assigned as the network responsible for that location.

Deriving outcomes

As this is a composite metric, babies will be measured against each of the following 6 measures for which they are eligible:

- Antenatal steroids
- Antenatal magnesium sulphate
- Birth in a centre with a neonatal intensive care unit (NICU)
- Deferred cord clamping
- Promoting normal temperature on admission

- Breastmilk feeding in the first 2 days of life

As there is variation in the inclusion criteria for these measures, not all babies are eligible for all 6 of them. Babies will only be measured against measures for which they are eligible.

Babies will be counted as *complete* if they have a complete status for all the measures for which they are eligible.

Babies will be counted as *missing* if they have a *missing* status for any of the measures for which they are eligible and no *non-adherent* status for the measures for which they are eligible.

Babies will be counted as non-adherent if they have at least one *non-adherent* status for any of the measures for which they are eligible.

2.1 Antenatal steroids (component measure)

Does a mother who delivers a baby between 22 and 33 weeks' gestational age receive a full course of antenatal corticosteroids within 1 week prior to delivery?[1]

Change to the audit measure for the 2025 data year: None.

NNAP standard

Developmental standard: None, initially benchmarking only for the new measure looking at administration of a full course.

Subject to outlier identification: *No.*

Comparison standard for outlier analysis: *N/A*

Inclusion criteria

Mothers of babies between 22 and 33 weeks gestational age. Only data from the first known episode of care will be considered for analysis. For multiple births, only one baby will be included so that each mother is only counted once per delivery.

Denominator: Number of mothers of babies between 22 and 33 weeks gestational age with complete antenatal steroid data.

Numerator: Number of mothers of babies between 22 and 33 weeks gestational age who received a full course of antenatal corticosteroids within 1 week prior to delivery.

Cohort: Babies who experienced their first admission in the calendar year of analysis.

Attribution

Results will be reported for each hospital of birth and network of birth.

When the place of birth is listed as *Home* or *Transit* the hospital and network will be assigned as the provider of their earliest episode. When the place of birth is the site of a closed unit, the hospital will be assigned as *Other* and the network will be assigned as the network responsible for that location.

Deriving outcomes

NNAP will use data from *Last dose of latest course*, *steroids given* and *steroid courses* to determine if the baby's mother received a full course of antenatal steroids within 1 week of birth. When multiple births present different data, data will be taken from the baby with "the most positive"* outcome.

**Most to least positive: timely completion, incomplete, missing data.*

When the steroids last dose timing indicates that the last dose of steroids was given after birth, this will be listed as incomplete.

When the steroids last dose timing has no data entered, Table 1 will be used to derive outcomes.

When the steroids last dose timing indicates that the last dose of steroids was given earlier than 7 days before birth, Table 2 will be used to derive outcomes.

When the steroids last dose timing is within 7 days of birth, Table 3 will be used to derive outcomes.

Table 1. Categorising data for antenatal steroids from BadgerNet fields steroids given and steroids courses when *Last dose of latest course* is not entered.

Last dose of latest course - Not entered			
Steroids given	Courses given		
	Complete within 7 days	Incomplete/no steroids within 7 days	Unknown/not entered
Yes	Missing	Incomplete	Missing
No	Missing	Incomplete	Incomplete
Unknown/Not entered	Missing	Incomplete	Missing

Table 2. Categorising data for antenatal steroids from BadgerNet fields steroids given and steroids courses when Last dose of latest course is not within 7 days of birth.

Last dose of latest course – Not within 7 days of birth			
Steroids given	Courses given		
	Complete within 7 days	Incomplete/no steroids within 7 days	Unknown/not entered
Yes	Missing	Incomplete	Incomplete
No	Missing	Incomplete	Incomplete
Unknown/Not entered	Missing	Incomplete	Incomplete

Table 3. Categorising data for antenatal steroids from BadgerNet fields steroids given and steroids courses when Last dose of latest course is within 7 days of birth.

Last dose of latest course - Within 7 days of birth			
Steroids given	Courses given		
	Complete within 7 days	Incomplete/no steroids within 7 days	Unknown/not entered
Yes	Timely completion	Incomplete	Missing
No	Timely completion	Incomplete	Missing
Unknown/Not entered	Timely completion	Incomplete	Missing

Note: Please use the time and data fields to enter only data about the most recent course of antenatal steroids.

BadgerNet data source

Data from the *Pregnancy Details* page, for *Steroids during pregnancy* will be used to determine if antenatal steroids were given.

Figure 3: Pregnancy Details page, BadgerNet

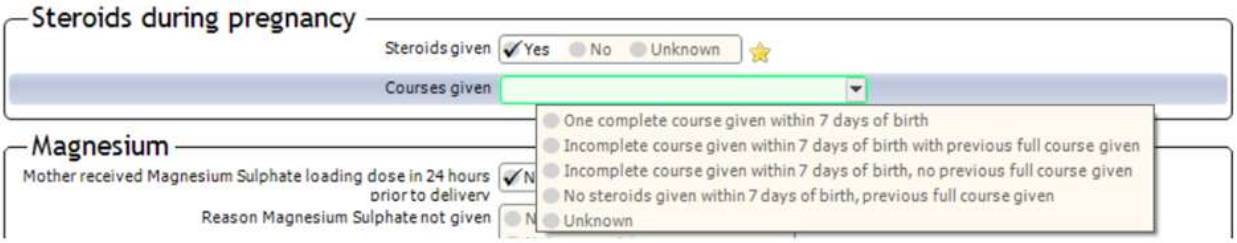
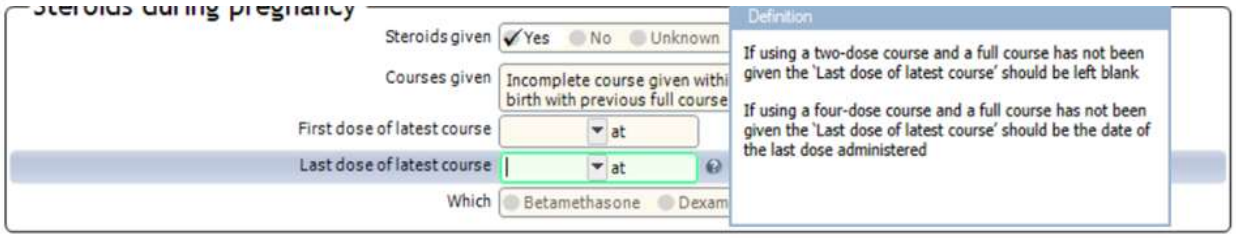


Figure 4: Entering first and last dose date and time, BadgerNet



2.2 Antenatal magnesium sulphate (component measure)

Does a mother who delivers a baby below 30 weeks' gestational age receive magnesium sulphate in the 24 hours prior to delivery?[1]

Change to the audit measure for 2025 data year: None.

NNAP standard

Developmental standard: Ninety percent (90%) of eligible mothers should receive antenatal magnesium sulphate.

Source of standard: NNAP Project Board

Subject to outlier identification: *Yes.*

Comparison standard for outlier analysis: *National proportion.*

Inclusion criteria

Mothers of babies between 22 and 29 weeks gestational age. Only data from the first known episode of care will be considered for analysis. For multiple births, only one baby will be included so that each mother is only counted once per delivery.

Denominator: Number of mothers of babies between 22 and 29 weeks gestational age with complete magnesium sulphate data.

Numerator: Number of mothers of babies between 22 and 29 weeks gestational age who receive magnesium sulphate in the 24 hours prior to delivery.

Cohort: Babies who experienced their first admission in the calendar year of analysis.

Attribution

Results will be reported for each hospital of birth and network of birth.

When the place of birth is listed as *Home* or *Transit* the hospital and network will be assigned as the provider of their earliest episode. When the place of birth is the site of a closed unit, the hospital will be assigned as *Other* and the network will be assigned as the network responsible for that location.

Deriving outcomes

NNAP will use data from *Mother received magnesium sulphate in 24 hours prior to delivery* to categorise the administration of magnesium sulphate. When multiple births present different data, data will be taken from the baby with "the most positive"* for the audit.

Table 3: Categorising antenatal magnesium sulphate from BadgerNet field Mother received magnesium sulphate in 24 hours prior to delivery

Q1: Mother received $MgSO_4$ loading dose in 24 hours prior to delivery?	Q2: Was a minimum of 4 hours of antenatal $MgSO_4$ given after a loading dose and completed within 4 hours of the birth?		
	Yes	No	Unknown/Not recorded
Yes	Given	Given	Given
No	Given	Not given	Not given
Unknown / Not recorded	Given	Not given	Missing

**Most to least positive: magnesium sulphate given, magnesium sulphate not given, missing / unknown data.*

BadgerNet data source

Data from the *Labour and Delivery* page for *Mother received magnesium sulphate in 24 hours prior to delivery* will be used to determine if magnesium sulphate was given.

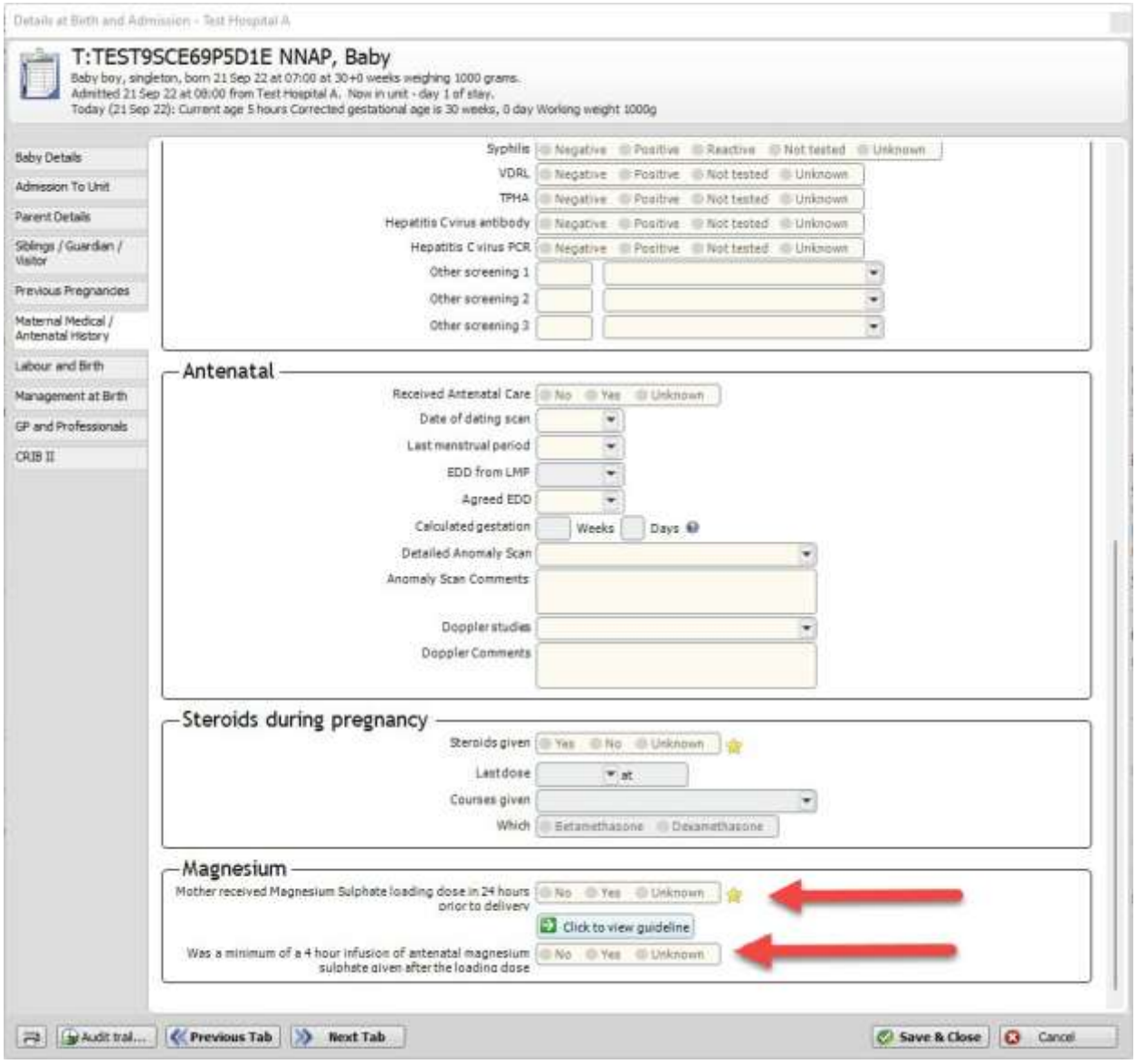


Figure 5: Labour and delivery page, BadgerNet

2.3 Birth in a centre with a neonatal intensive care unit (component measure)

Is a baby:

- *born at less than 27 weeks gestational age, or*
- *less than 800 grams at birth, or*
- *born as a multiple at less than 28 weeks gestational age*

delivered in a maternity service on the same site as a designated neonatal intensive care unit (NICU)?

Change to the audit measure for 2025 data year: None.

NNAP standard

Developmental standard: Eighty-five (85%) of babies born at less than 27 weeks gestational age should be delivered in a maternity service on the same site as a NICU.

Source of standard: Neonatal Critical Care Clinical Reference Group, NHS England.

Subject to outlier identification: *No.*

Comparison standard for outlier analysis: *N/A*

Inclusion criteria

Mothers of babies between 22 and 26 weeks gestational age or at less than 800 grams at birth, or a multiple at between 22 and 27 weeks gestational age. Only data from the first known episode of care will be considered for analysis. For multiple births, only one baby will be included so that each mother is only counted once per delivery.

Denominator: Number of mothers of babies between 22 and 26 weeks gestational age or at less than 800 grams at birth, or a multiple at between 22 and 27 weeks gestational age.

Numerator: Number of mothers of babies between 22 and 26 weeks gestational age or at less than 800 grams at birth, or a multiple at between 22 and 27 weeks gestational age, who are delivered on a site with an NICU.

Cohort: Babies who experienced their first admission in the calendar year of analysis.

Attribution

Attribution will be to the neonatal network of birth. Outcomes will be reported by neonatal network of birth. Babies whose place of birth is listed as *Home or Transit* will have their network of birth updated to the provider network of their earliest episode.

Deriving outcomes

NNAP will use data from the place of birth to determine the level of neonatal unit within the hospital where babies were delivered (Table).

Table 4: Categorising birth in a centre with a NICU from BadgerNet field Place of birth

Place of birth	NNAP category
Hospital with a designated NICU	Delivered in appropriately designated location (NICU)
Hospital with a designated local neonatal unit (LNU) / special care unit (SCU)	Delivered in inappropriately designated location (LNU / SCU)
Hospital with no designated neonatal unit/ non-hospital location	Delivered in location without neonatal facilities

BadgerNet data source

Data on place of birth are captured on BadgerNet on the *Details at Birth and Admission* page. Values from the *Place of birth* field are used by NNAP for analysis (Figure).

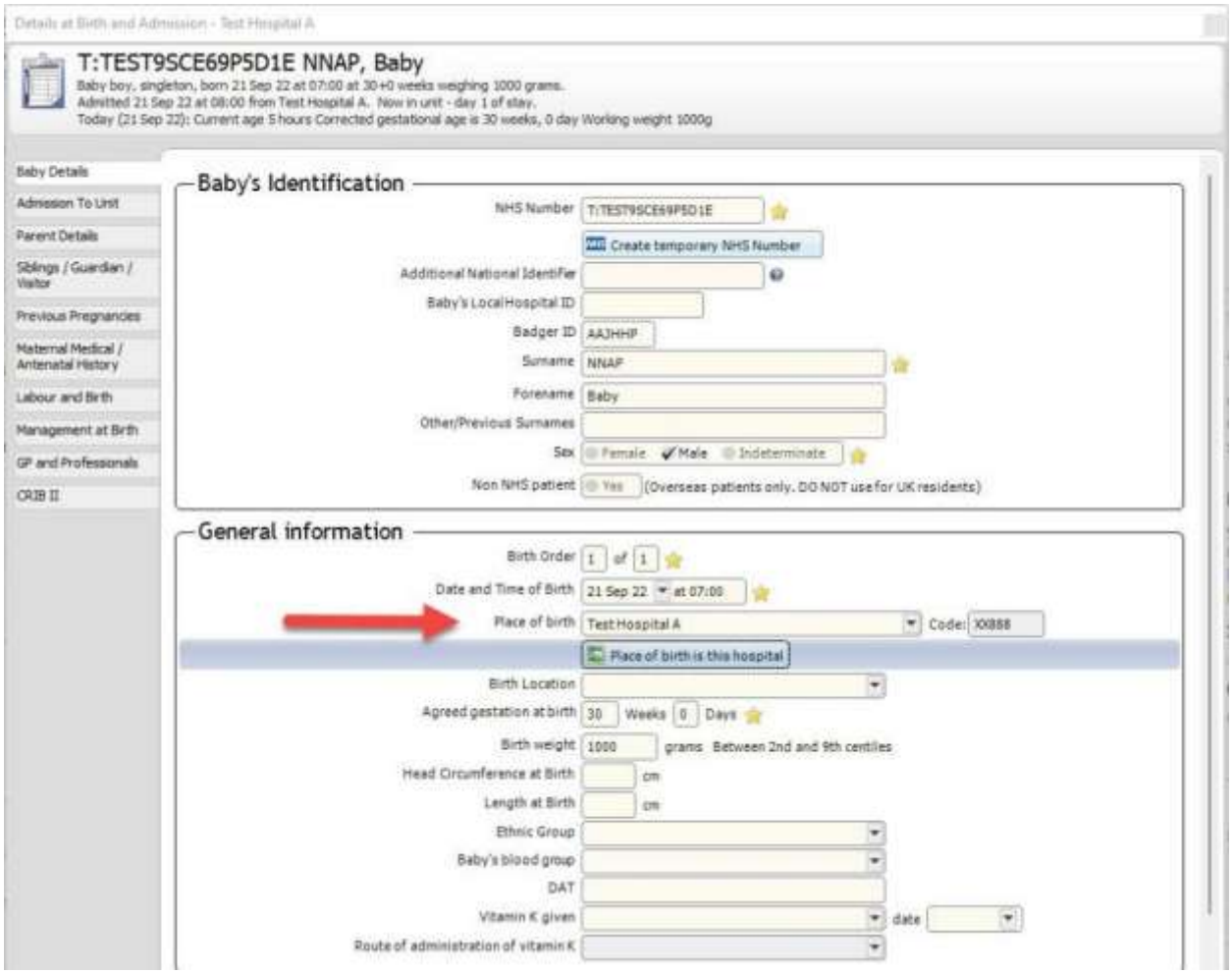


Figure 6: Details at birth and admission page, BadgerNet

2.4 Deferred cord clamping (component measure)

Does a baby born at less than 34 weeks' gestational age have their cord clamped at or after one minute?[1]

Change to the audit measure for 2025 data year: None.

NNAP standard

Developmental standard: Seventy-five percent (75%) of babies born at less than 34 weeks gestational age should have their cord clamped at or after one minute.

Subject to outlier identification: *Yes.*

Comparison standard for outlier analysis: *N/A*

Inclusion criteria

Babies born between 22 and 33 weeks gestational age. Only the first known episode of care will be considered for analysis.

Denominator: Number of babies born between 22 and 33 weeks gestational age with complete cord clamping data.

Numerator: Number of babies born between 22 and 33 weeks gestational age who had their cord clamped at or after 1 minute.

Cohort: Babies who experienced their first admission in the calendar year of analysis.

Attribution

Results will be reported for each hospital of birth and network of birth.

When the place of birth is listed as *Home* or *Transit* the hospital and network will be assigned as the provider of their earliest episode. When the place of birth is the site of a closed unit, the hospital will be assigned as *Other* and the network will be assigned as the network responsible for that location.

Deriving outcomes

NNAP will use data from the *Time of Cord Clamping* to determine whether cord clamping was deferred for 1 minute or more (Table).

Table 5: Categorising time of cord clamping in the NNAP

Time of cord clamping*			
Missing	< 0 minutes	Less than a minute after birth	Greater than or equal to one minute after birth
Time of cord clamping missing	Time of cord clamping missing	Less than 1 minute after birth	Deferred cord clamping (≥ 1 minute)

*Time of cord clamping is calculated by combining the *time of cord clamp minutes* and *time of cord clamp seconds* fields. If one of the two fields is not recorded, the not recorded field will be counted as 0, if both fields are not recorded, time of cord clamping will be counted as *missing*, unless immediate cord clamping is indicated on BadgerNet.

BadgerNet data source

Data on time of cord clamping are taken from the field *Time from birth to clamp* on the *Labour and Birth* page.

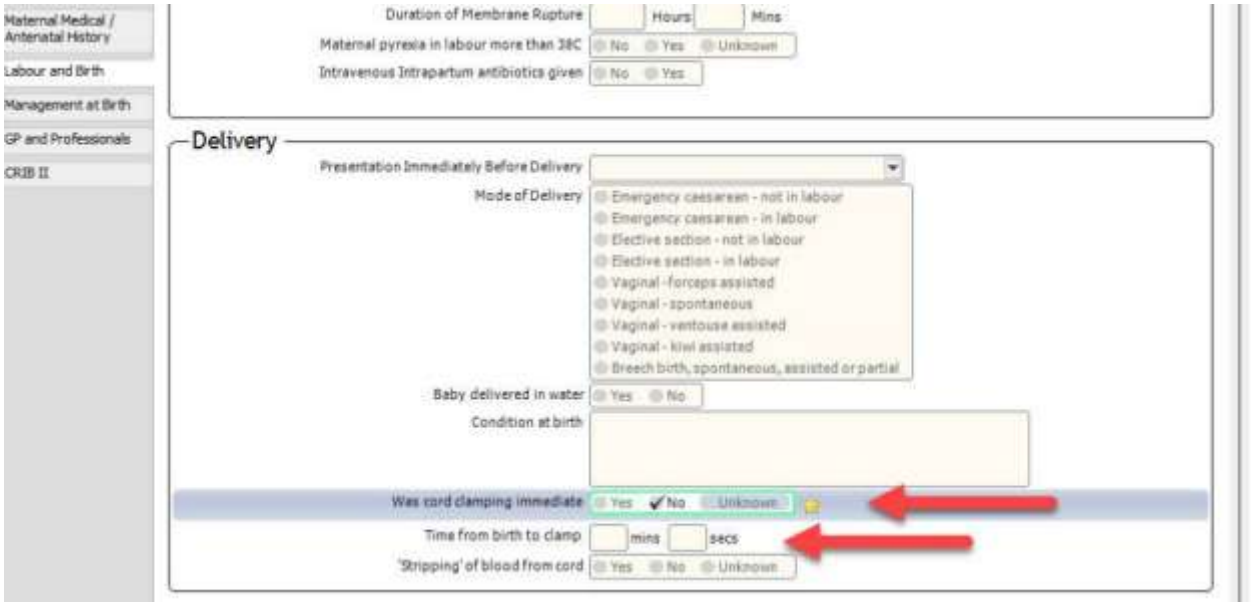


Figure 7: Delivery section, Labour and birth page, BadgerNet

2.5 Promoting normal temperature on admission (component measure)

Does a baby born at less than 34 weeks' gestational age have a first temperature on admission which is both between 36.5–37.5°C and measured within one hour of birth?

Change to the audit measure for 2025 data year: None.

- In 2024, the denominator changed to include babies admitted within 12 hours of birth, previously the denominator only included those admitted within an hour.
- In 2023, the upper gestational age cut-off was increased from 32 weeks to 34 weeks, in line with MatNeoSIP measurement.

NNAP standard

Developmental standard: First temperature on admission should be taken within an hour of birth for all eligible babies.

The composite measure of timeliness and normal temperature should be met for at least ninety percent (90%) of babies.

Source of standard: NNAP Project Board

Subject to outlier identification: *Yes.*

Comparison standard for outlier analysis: *National proportion.*

Inclusion criteria

Babies born between 22 and 33 weeks gestational age and admitted to a neonatal unit within 12 hours of birth. Only the first known episode of care will be considered for analysis.

Denominator: Number of babies born between 22 and 33 weeks gestational age with complete temperature data and admitted to a neonatal unit within 12 hours of birth.

Numerator: Number of babies born between 22 and 33 weeks gestational age who have a first temperature on admission which is both between 36.5 37.5°C and measured within one hour of birth.

Cohort: Babies who experienced their first admission in the calendar year of analysis.

Attribution

Results will be reported for each hospital of birth and network of birth.

When the place of birth is listed as *Home* or *Transit* the hospital and network will be assigned as the provider of their earliest episode. When the place of birth is the site of a closed unit, the hospital will be assigned as *Other* and the network will be assigned as the network responsible for that location.

Deriving outcomes

NNAP will use data from the first temperature taken after admission to categorise when babies had their temperature taken, and the value of temperature measurement (Table).

Table 6: Categorising temperature measurement from BadgerNet fields Temperature measured after admission, Temperature value and Temperature not recordable

Time of first temperature measurement (minutes from birth)	Value of first temperature measurement				
	Temp. not taken	< 35.9°C	36-36.4°C	36.5-37.5°C	>37.5°C
Temperature not taken after admission	Not taken	Not taken	Not taken	Not taken	Not taken
Within an hour (≤ 60 minutes from birth)	Not taken	Within an hour	Within an hour	Within an hour and between 36.5-37.5	Within an hour and >37.5
After an hour (> 60 minutes from birth)	Not taken	Late	Late	Late	Late

Categorising temperature values

Babies with a temperature measured *Within an hour* will be further categorised into the following groups based on their temperature values:

- Less than 32.0°C
- 32.0°C-35.9°C
- 36.0°C-36.4°C
- 36.5°C-37.5°C (normothermic)
- Greater than 37.5 °C

When the temperature value was not recordable, babies will be assigned to the 32.0°C-35.9°C group.

BadgerNet data source

Details on temperature measurement are captured on BadgerNet on the *Details at Birth and Admission* page. Values from the *Temperature measured after admission*, *Temperature value* and *Temperature not recordable* fields are used by NNAP for analysis (Indicated below).

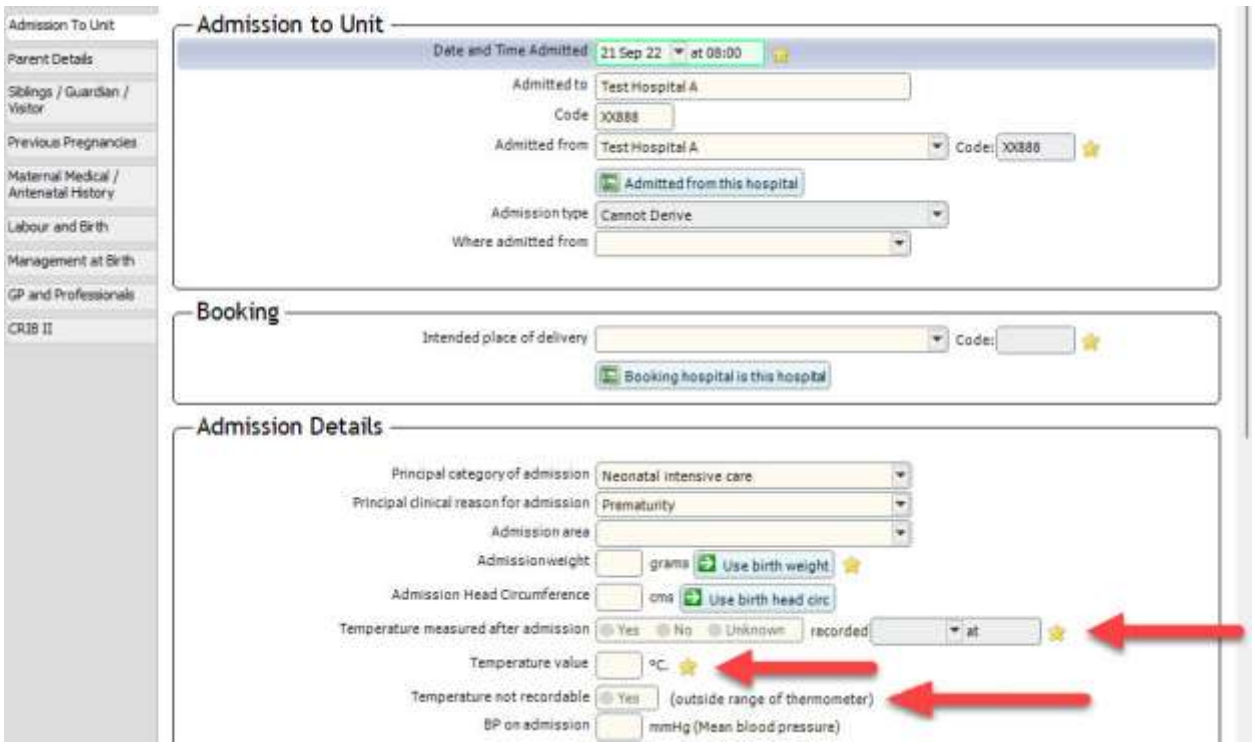


Figure 8: Details at birth and admission page, BadgerNet

2.6 Breastmilk feeding in the first 2 days of life (component measure)

Does a baby born at less than 34 weeks' gestational age receive any of their own mother's milk in the first 2 days of life?

Change to the audit measure for 2025 data year: None.

NNAP standard

Developmental standard: Sixty percent (60%) of babies born at less than 34 weeks should receive any of their own mother's milk in the first 2 days of life.

Subject to outlier identification: *Yes.*

Comparison standard for outlier analysis: *National proportion.*

Inclusion criteria

Babies born between 22 and 33 weeks gestational age who survive to 48 hours on a neonatal unit.

Denominator: Number of babies born between 22 and 33 weeks gestational age who survive to 48 hours on a neonatal unit and have complete feeding data for either of their first two days of life.

Numerator: Number of babies born between 22 and 33 weeks gestational age who receive any of their own mother's milk in the first two days of life.

Cohort: Babies who experienced their first admission in the calendar year of analysis.*

**Note that the cohort of babies included in this measure is different to measures 4.2 and 4.3, which consider babies discharged in the calendar year of analysis.*

Attribution

- Babies will be attributed to their hospital and network of first admission.

Deriving outcomes

Babies will be classified as meeting the NNAP standard if they are noted to have received any of the following types of enteral feed or mouth care on the day of birth or day after birth.

- Suckling at the breast
- Mother's fresh expressed breastmilk
- Mother's frozen expressed breastmilk
- Breastmilk (mouth care)
- Colostrum (mouth care)

BadgerNet data source

The primary source for information on feeding is daily summary data on enteral feeds and mouth care for the day of birth or day after birth on the BadgerNet system.

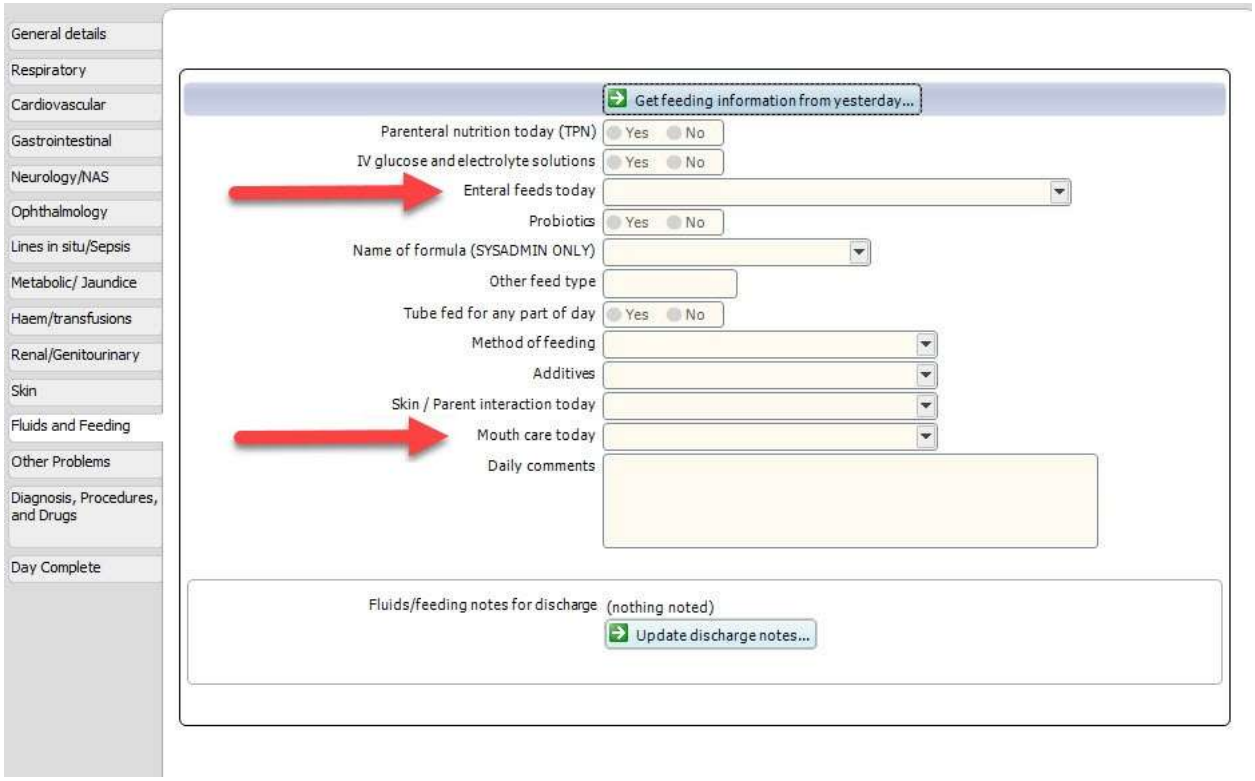


Figure 9: Daily summary data, BadgerNet.

3 Clinical outcomes composite metric

Proportion of babies born between 24 and 31 weeks gestation inclusive who did not have a reported serious complication of prematurity (late onset infection, NEC, BPD, serious preterm brain injury or mortality).

Change to the audit measure for the 2025 data year: None.

- In 2023, this was a new measure derived from existing individual measures already reported by the NNAP. No additional data collection.

NNAP standard

Developmental standard: None, initially benchmarking only for the new measure.

Subject to outlier identification: *No.*

Comparison standard for outlier analysis: *N/A*

Inclusion criteria

Babies admitted to a neonatal unit whose birth gestation is between 24 and 31 weeks inclusive. For multiple births, each baby will be included.

Denominator: Number of babies admitted to a neonatal unit whose birth gestation is between 24 and 31 weeks inclusive, and who are not classified as *missing*.

Numerator: Number of babies admitted to a neonatal unit whose birth gestation is between 24 and 31 weeks inclusive and who do not experience any of the adverse outcomes from the component measures for which they are eligible. Babies will be assessed against each of the measures for which they are eligible, this means that some babies will not be measured against all 6 measures.

Cohort: Babies who turned 44 weeks PMA within the reporting period.

Attribution

Results will be reported for each hospital of birth and network of birth.

When the place of birth is listed as *Home* or *Transit* the hospital and network will be assigned as the provider of their earliest episode. When the place of birth is the site of a closed unit, the hospital will be assigned as *Other* and the network will be assigned as the network responsible for that location.

Deriving outcomes

As this is a composite measure, babies will be measured against each of the following 6 measures for which they are eligible*:

- Bronchopulmonary dysplasia
- Necrotising enterocolitis
- Bloodstream infection
- Mortality
- Serious brain injury – IVH 3/4
- Serious brain injury – cPVL
- Serious brain injury – PHVD

As there is variation in the inclusion criteria for these measures, not all babies are eligible for all 6 of them. Babies will only be measured against measures for which they are eligible.

Babies will be counted as having an *adverse outcome* if they have an adverse outcome for any of the measures for which they are eligible.

Babies will be counted as having *no adverse outcome* if they have no adverse outcome for all of the measures for which they are eligible.

Babies will be counted as *missing* if they have a *missing* status for any of the measures for which they are eligible and no adverse outcomes for the other measures for which they are eligible.

**Examples of ineligibility include babies first admitted to an NNAP NNU after 48 (NEC measure) or 72 (BSI measure) hours of life.*

3.1 Bloodstream infection (component measure)

Does an admitted baby born at less than 32 weeks have one or more episodes of bloodstream infection, characterised by one or more positive blood cultures taken with a clearly pathogenic organism, after 72 hours of age?

Change to the audit measure for 2025 data year: None.

NNAP standard

Developmental standard: Benchmarking only.

Subject to outlier identification: *Yes, on treatment effect.*

Comparison standard for outlier analysis: *Average treatment effect.*

Inclusion criteria

Babies between 22 and 31 weeks gestational age who were present on a neonatal unit at 72 hours of age.

Denominator: Number of babies between 22 and 31 weeks gestational age who were present on a neonatal unit at 72 hours of age.

Numerator: Number of babies between 22 and 31 weeks gestational age who were present on a neonatal unit at 72 hours of age who had one more positive blood cultures with a pure growth of a clearly pathogenic organism taken after 72 hours of age.

Cohort: Babies who experienced their final neonatal discharge in the calendar year of analysis.

Attribution

Blood cultures will be attributed to the neonatal unit of care when the culture was taken, or for units where there were two such units on a day of care, the unit completing the culture form. Babies will be counted as eligible once in each neonatal unit they were admitted to.

Deriving outcomes

Growths of bacteria, yeasts or fungi will be classified as per Table . A reference list of clearly pathogenic organisms will be used (see Appendix 1 of this measures guide).

Table 7: Classification of organisms grown in blood cultures - late onset bloodstream infection

Pathogens classification	Fungal and bacterial culture growths	Organisms of uncertain significance
Pure growths	Pathogenic	Not clearly pathogenic
Mixed growths	Not clearly pathogenic	Not clearly pathogenic

Data pertaining to late onset bloodstream infection will be subdivided by "any positive culture" and "clearly pathogenic organism". Data viewing will be further enhanced by presentation of an indication that all positive blood cultures have been entered, for centres where this is the case.

BadgerNet data source

Details for blood cultures and their results will be captured via ad-hoc forms for cultures on BadgerNet.

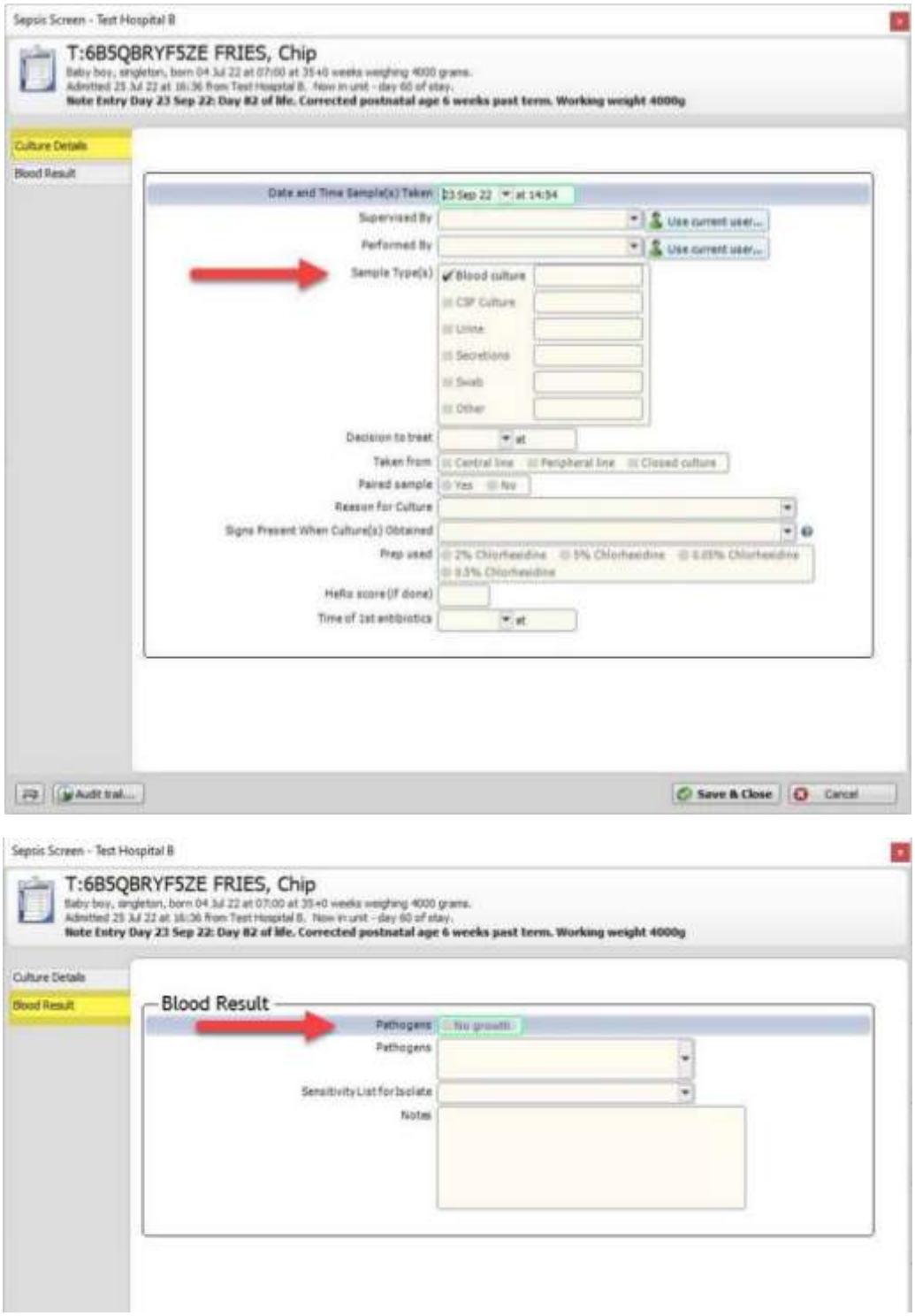


Figure 10: Ad-hoc form for blood culture taken (top), and ad-hoc form for blood culture results (bottom)

3.2 Bronchopulmonary dysplasia (component measure)

Does an admitted baby born at less than 32 weeks' gestational age develop bronchopulmonary dysplasia (BPD) or die?

Change to the audit measure for 2025 data year: None.

- In 2023, the cohort changed from babies discharged within the calendar year of analysis to babies who turned 44 weeks PMA in the calendar year of analysis.
- From 2023, the NNAP will report BPD on 1-year epochs. Previously the NNAP reported three-year rolling epochs.

NNAP standard

Developmental standard: None, benchmarking only.

Subject to outlier identification: *Yes, on treatment effect.*

Comparison standard for outlier analysis: *Average treatment effect.*

Inclusion criteria

Babies born between 22 and 31 weeks gestational age who were first admitted to a neonatal unit before 36 weeks PMA.

Denominator: Number of babies born between 22 and 31 weeks gestational age first admitted to a neonatal unit before 36 weeks PMA, and who have complete respiratory data at 36 weeks of life.

Numerator: Number of babies born between 22 and 31 weeks gestational age, who developed BPD or died before 36 weeks PMA.

Cohort: Babies who turned 44 weeks PMA in the calendar year of analysis.

Attribution

Attribution will be to the hospital of birth. Outcomes will also be reported by network of birth.

When the place of birth is *Home* or *Transit* the hospital will be assigned as *Other* and the network will be assigned as the network associated with the first episode. When the place of birth is the site of a closed unit, the hospital will be assigned as *Other* and the network will be assigned as the network responsible for that location.

In cases where a baby is transferred, categorisation of a patient is made using episodes that are not held by the unit that has been attributed the patient. The hospital that cares for the patient upon reaching 36 weeks' post-menstrual age time is responsible for updating episodic data, even if they have not been finally attributed the patient. We therefore ask all units to review the 'BPD Responsible' tab on the Restricted Access Dashboard (RAD) and ensure they are cleaned for other units' data.

Deriving outcomes

BPD will be defined by the level of respiratory support received at 36 weeks' post-menstrual age (Table 6).

When a baby was discharged from neonatal care before reaching 36 weeks' post-menstrual age, data from the time of discharge will be used instead.

Table 8: Categorising BPD or death in NNAP based on daily respiratory support data

Survival at 36 weeks CGA	Respiratory data from 36 weeks post-menstrual age / final discharge		
	Not receiving respiratory support	Receiving respiratory support*	Missing required respiratory data**
Died before 36 weeks PMA	Died	Died	Died
Survived to 36 weeks PMA	No BPD	BPD	BPD not determinable

*'*Respiratory Support' is defined as receiving any of the following at the specified time:*

- *Ventilation*
- *CPAP*
- *Non-invasive ventilation (e.g. BiPAP)*
- *Hi flow nasal cannula therapy (i.e. ≥ 2 lpm gas flow)*
- *Oxygen treatment*

** *In instances where respiratory data is not available for the specified day, data from the subsequent day of care (or penultimate day of care for babies discharged at less than 36 weeks) will be sought instead. When respiratory data is also missing from this second source the baby will be classified as 'Missing required data' for that period.*

Babies will be defined as having missing data if there is no data available to determine respiratory support.

BadgerNet data source

Details on respiratory support used to calculate levels of BPD are captured on BadgerNet in daily summary forms. A form is created for each baby for each calendar day where they are an inpatient on a neonatal unit, and the fields *Respiratory Support*, *Added oxygen*, *Mode of ventilation* and *Mode of non-invasive support* will be used by the NNAP.

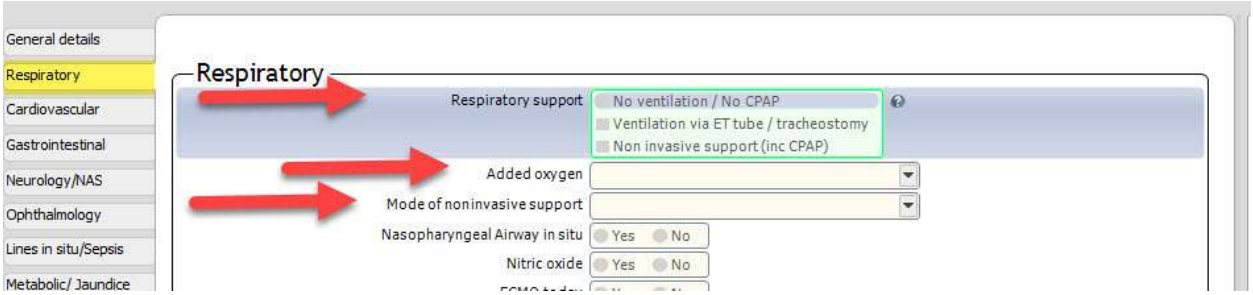


Figure 11: Daily summary form, BadgerNet

3.3 Necrotising enterocolitis (component measure)

Does an admitted baby born at less than 32 weeks' gestational age meet the NNAP surveillance definition for necrotising enterocolitis (NEC) on one or more occasion?

Change to the audit measure for 2025 data year: None.

NNAP standard

Developmental standard: Benchmarking

Subject to outlier identification: *Yes, on treatment effect.*

Comparison standard for outlier analysis: *Average treatment effect.*

Inclusion criteria

Babies born between 22 and 31 weeks gestational age who survived to 48 hours after birth.

Denominator: Number of babies born between 22 and 31 weeks gestational age who survived to 48 hours after birth and who have a complete NEC diagnosis field.

Numerator: Number of babies born between 22 and 31 weeks gestational age who survived to 48 hours after birth and who meet the NNAP surveillance definition for necrotising enterocolitis on one or more occasion.

Cohort: Babies discharged in the calendar year of analysis.

Attribution

- Babies will be attributed to their location of care at 48 hours of life, which is intended as a proxy measure of the intention to provide ongoing care for a baby in a given neonatal unit.
- When a baby is in transit between units at 48 hours of life the baby will be assigned to the transferring hospital. When multiple admission locations exist at 48 hours of life, the baby will be attributed to the earliest associated admission time.
- NEC status is categorised using all episodes of each eligible patient. If a unit has episodes for patients who are not attributed to that unit (and those episodes contain missing data), they will be highlighted in the 'NEC Responsible' tab of the Restricted Access Dashboard.

Deriving outcomes

The outcome is based on an analysis of all episodes for each eligible baby, using the following order of priority for the final outcome: Confirmed NEC > NEC status missing > No NEC.

NEC may be diagnosed at surgery, post-mortem or based on the following clinical and radiographic signs.

At least one clinical feature from:

- Bilious gastric aspirate or emesis
- Abdominal distension
- Occult or gross blood in stool (no fissure)

And at least one radiographic feature from:

- Pneumatosis

- Hepato-biliary gas
- Pneumoperitoneum

Infants clinically diagnosed as NEC using the clinical and radiographic criteria who are found at surgery or post-mortem to have "Focal Intestinal Perforation" should not be recorded as having NEC.

Table 9: Categorisation of NEC diagnosis

Survival to discharge home	Was NEC Diagnosed during this admission?					
	NEC diagnosis based on surgery	NEC diagnosis based on post-mortem	NEC diagnosis based on presence of clinical signs		NEC not diagnosed	NEC diagnosis data not recorded
			At least 1 radiographic and 1 clinical feature	Radiographic or clinical features missing		
Survived to discharge home	NEC	NEC	NEC	No NEC (NEC undiagnosed)	No NEC	Missing data
Died prior to discharge home	NEC	NEC	NEC	No NEC (NEC undiagnosed)	No NEC but died prior to discharge	Missing data

BadgerNet data source

For babies born at less than 32 weeks', the field *Was NEC diagnosed during this admission?* will appear on the *Discharge details* data from this field, and its follow on question (*Based on*, *Clinical feature(s)*, *Radiographic Features*.

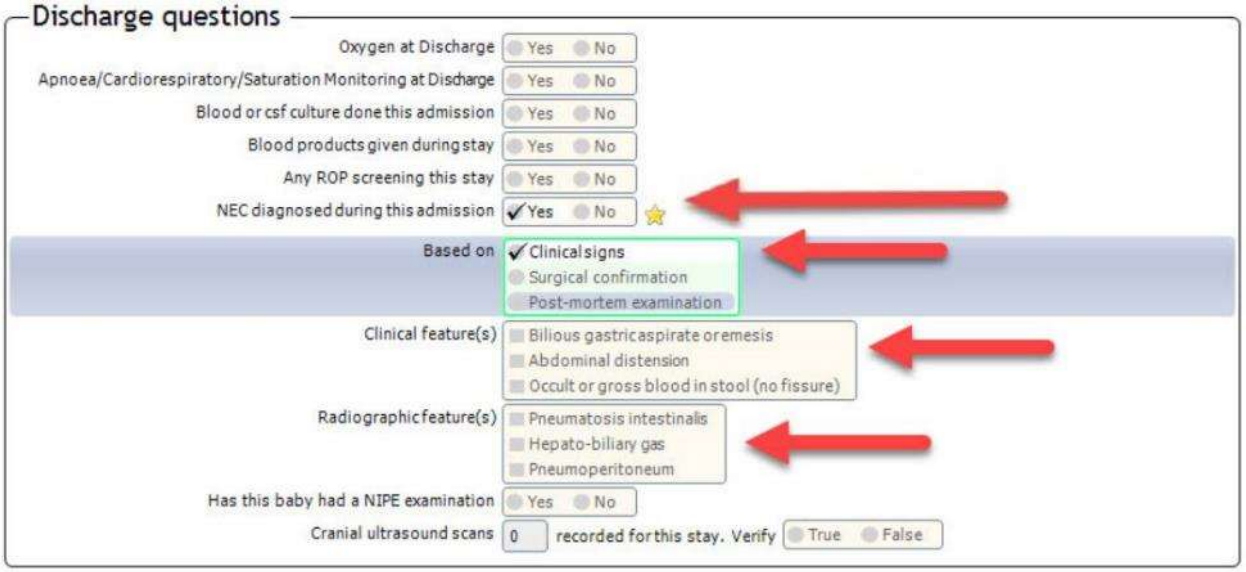


Figure 12: Discharge details page, BadgerNet

3.4 Preterm brain injury – IVH 3 or 4 (component measure)

Does a baby born at less than 32 weeks' gestational age experience any *intraventricular haemorrhage (IVH) grade 3 or 4?*

Change to the audit measures for 2025 data year: None.

- In 2023, the cohort changed from babies discharged within the calendar year of analysis to babies who turned 44 weeks PMA in the calendar year of analysis.

NNAP standard

Developmental standard: None, benchmarking only.

Subject to outlier identification: *Yes, on missing data.*

Comparison standard for outlier analysis: *National percentiles of missing data.*

Inclusion criteria

Babies born between 22 and 31 weeks gestational age.

Denominator: Number of babies born between 22 and 31 weeks gestational age with data for at least one scan completed within the first 28 days of life.

Numerator: Number of babies born between 22 and 31 weeks gestational age with data for at least one scan completed within the first 28 days of life, and who experience IVH 3/4 or die before discharge.

Note: babies who died in the first week of life will be included in the numerator and denominator even if they do not have complete scan results.

Cohort: Babies who turned 44 weeks PMA in the calendar year of analysis.

Attribution

Outcomes will be attributed to the unit and network of birth.

When the place of birth is *Home* or *Transit* the hospital will be assigned as *Other* and the network will be assigned as the network associated with the first episode. When the place of birth is the site of a closed unit, the hospital will be assigned as *Other* and the network will be assigned as the network responsible for that location.

In cases where a baby is transferred, categorisation of a patient is made using episodes that are not held by the unit that has been attributed the patient. All units that care for a baby that meets the inclusion criteria for this measure are responsible for updating scan data, even if they have not been finally attributed the patient. We therefore ask all units to review the 'IVH Responsible' tab on the RAD and ensure they are cleaned for other units' data.

Deriving outcomes

The analysis will be based on cranial ultrasound imaging data. Where no imaging is recorded for a baby, this will be reported as Missing Data.

Where babies have scans recorded within 28 days of life, but the data pertaining to IVH is missing, babies will be regarded as having missing data.

The outcomes will be reported according to the following definition, which are also visible in the Badger system:

Germinal Matrix/ Intraventricular Haemorrhage and Haemorrhagic Parenchymal Infarction

Recording the worst grade of GMH-IVH interpreted by any cranial ultrasound or MRI, performed on or before day 28 after birth; or clarify that no imaging was performed in the first 28 days.

Grading is based on an ultrasound classification system and is recorded separately per side (i.e. left and/or right):[2]

- No germinal matrix or intraventricular haemorrhage
- Grade 1: Germinal matrix haemorrhage with no or minimal intraventricular haemorrhage (<10% of ventricular area on parasagittal view)
- Grade 2: Intraventricular haemorrhage (10-50% of ventricular area on parasagittal view)
- Grade 3: Intraventricular haemorrhage (>50% of ventricular area on parasagittal view; usually distends lateral ventricle).
- Grade 4: Haemorrhagic infarction in periventricular white matter (with or without IVH)

BadgerNet Data Source

In the discharge details section of BadgerNet, professionals discharging a baby are asked to complete the following:

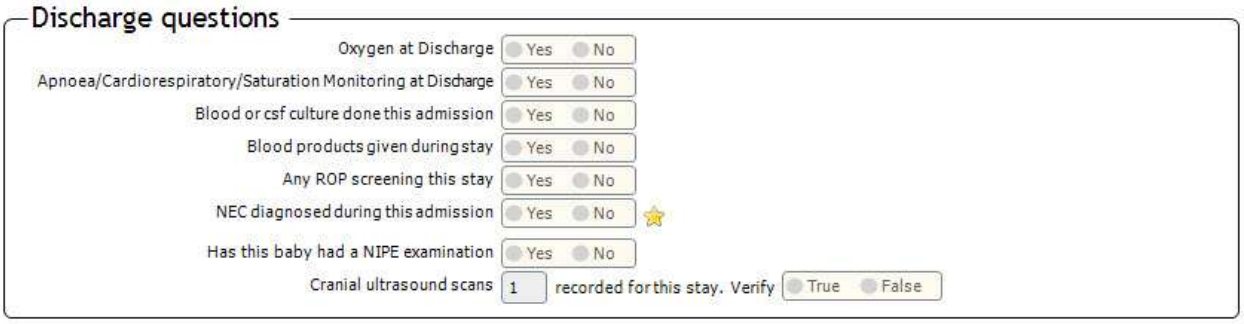


Figure 13: Discharge details, BadgerNet.

Clinical staff are asked to ensure the number of scans entered, and the scan data recorded adequately describes the full extent of scan findings, according to the classification system described above, for the IVH, cPVL and PHVD measures. The verification of the number of scans is designed to act as a prompt to clinical staff at discharge, to ensure this data entry is adequate.

The scan should be recorded using the cranial ultrasound section of the "Procedures/ events tab". Findings from the examination should be recorded as below:

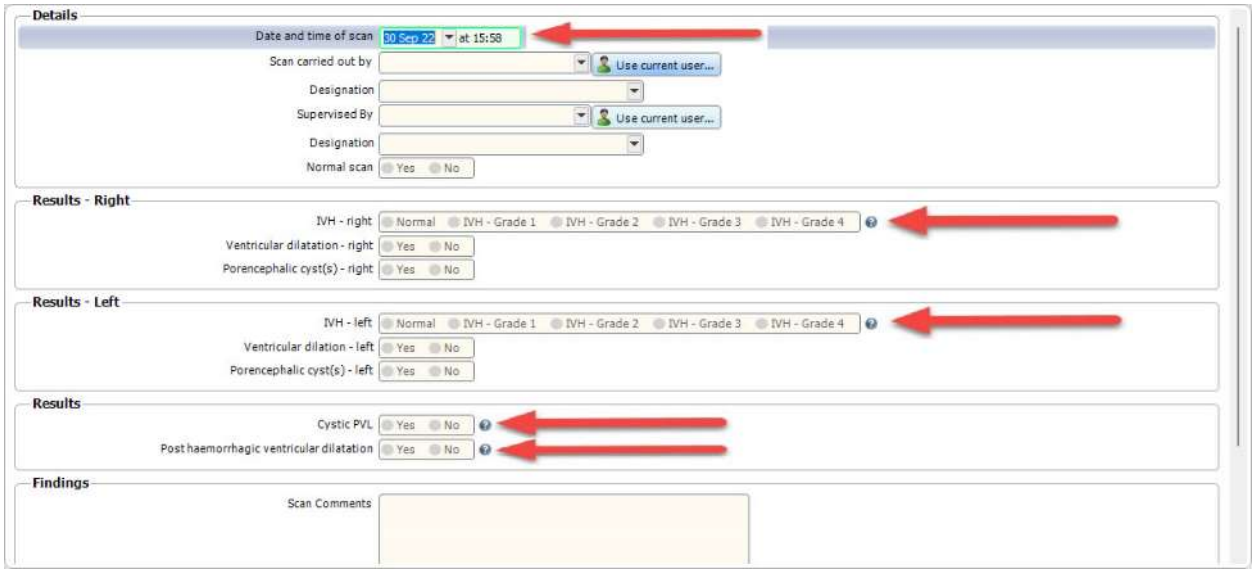


Figure 14: Procedures/ events tab, BadgerNet.

Important note: Entering cranial ultrasound scans on BadgerNet

We are aware of an issue with BadgerNet which means that users can't add a cranial ultrasound scan record via the Procedures/events tab in the BadgerNet client if a baby cared for in your unit went on to have a subsequent episode in another unit. System C are aware of this and are working on a fix, however in the meantime you can use the "smart search" function and search for "cranial" to add a new note to the desired episode of care. If you have any questions about how to do this, please do get in touch with System C directly.

Please also note that details entered into BadgerNet EPR's Detailed Cranial Ultrasound form are not currently included in the analysis.

3.5 Preterm brain injury – cPVL (component measure)

Does a baby born at less than 32 weeks' gestational age experience ***cystic periventricular leukomalacia (cPVL)?***

Change to the audit measures for 2025 data year: None.

- In 2023, the cohort changed from babies discharged within the calendar year of analysis to babies who turned 44 weeks PMA in the calendar year of analysis.

NNAP standard

Developmental standard: None, benchmarking only.

Subject to outlier identification: *No.*

Comparison standard for outlier analysis: *N/A*

Inclusion criteria

Babies born between 22 and 31 weeks gestational age.

Denominator: Number of babies born between 22 and 31 weeks gestational age with a complete scan.

Numerator: Number of babies born between 22 and 31 weeks gestational age with a complete scan, who experience cPVL or die before discharge.

Cohort: Babies who turned 44 weeks PMA in the calendar year of analysis.

Attribution

Outcomes will be attributed to the unit and network of birth.

When the place of birth is *Home* or *Transit* the hospital will be assigned as *Other* and the network will be assigned as the network associated with the first episode. When the place of birth is the site of a closed unit the hospital will be assigned as *Other* and the network will be assigned as the network responsible for that location.

In cases where a baby is transferred, categorisation of a patient is made using episodes that are not held by the unit that has been attributed the patient. All units that care for a baby that meets the inclusion criteria for this measure are responsible for updating episodic data, even if they have not been finally attributed the patient. We therefore ask all units to review the 'cPVL Responsible' tab on the RAD and ensure they are cleaned for other units' data.

Deriving outcomes

The analysis will be based on cranial ultrasound imaging data. Where no imaging is recorded for a baby, this will be reported as Missing Data.

Where babies have scans on the system, but the scan contains no relevant data, they will be listed as Missing Data.

The outcomes will be reported according to the following definition, which is also visible in the Badger system:

Cystic Periventricular Leukomalacia

At any time during the infant's stay:

- Evidence of cystic periventricular leukomalacia on a cranial ultrasound or MRI scan obtained at any time during admission or clarify that NO imaging was performed during the admission.
- To be considered cystic periventricular leukomalacia there must be multiple small periventricular cysts identified in the white matter.
- Connatal cysts should not be included. Connatal cysts are thin walled cysts in the lateral aspect of frontal horn of lateral ventricle and anterior to the foramen of Monro.

BadgerNet data source

In the discharge details section of BadgerNet, professionals discharging a baby are asked to complete the following:

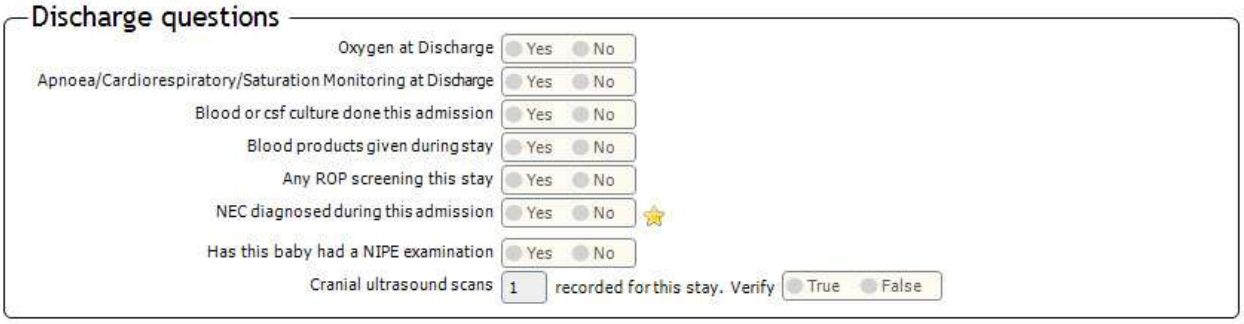


Figure 15: Discharge details section of BadgerNet.

Clinical staff are asked to ensure the scan data recorded adequately describes the scan findings, according to the classification system described above, for eligible babies.

The scan should be recorded using the cranial ultrasound section of the "Procedures/ events tab". Findings from the examination should be recorded as below:

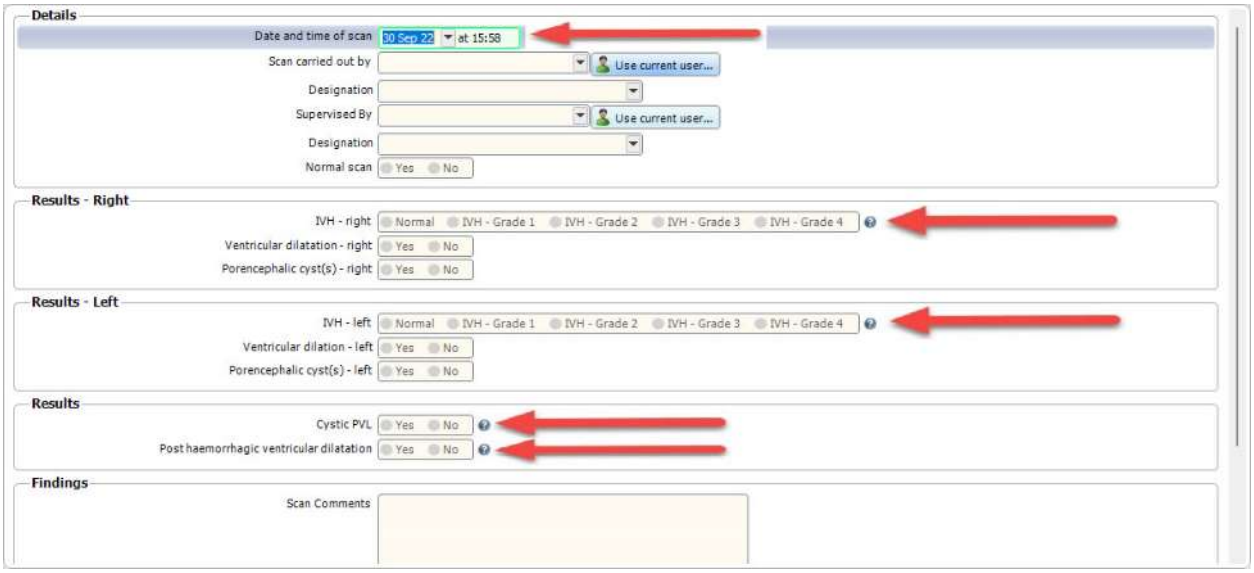


Figure 16: Procedures/events tab, BadgerNet.

Important note: Entering cranial ultrasound scans on BadgerNet

We are aware of an issue with BadgerNet which means that you can't add a cranial ultrasound scan record via the Procedures/events tab in the BadgerNet client if a baby cared for in your unit went on to have a subsequent episode in another unit. System C are aware of this and are working on a fix, however in the meantime you can use the "smart search"

function and search for “cranial” to add a new note to the desired episode of care. If you have any questions about how to do this, please do get in touch with System C directly.

Please also note that details entered into BadgerNet EPR’s Detailed Cranial Ultrasound form are not currently included in the analysis.

3.6 Preterm brain injury – PHVD (component measure)

Does a baby born at less than 32 weeks' gestational age experience ***Post-haemorrhagic ventricular dilatation (PHVD)?***

Change to the audit measures for 2025 data year: None.

- In 2023, the cohort changed from babies discharged within the calendar year of analysis to babies who turned 44 weeks PMA in the calendar year of analysis.

NNAP standard

Developmental standard: None, benchmarking only.

Subject to outlier identification: *No.*

Comparison standard for outlier analysis: *N/A*

Inclusion criteria

Babies born between 22 and 31 weeks gestational age.

Denominator: Number of babies born between 22 and 31 weeks gestational age with a complete scan.

Numerator: Number of babies born between 22 and 31 weeks gestational age with a complete scan, who experience PHVD or die before discharge.

Cohort: Babies who turned 44 weeks PMA in the calendar year of analysis.

Attribution

Outcomes will be attributed to the unit and network of birth.

When the place of birth is *Home* or *Transit* the hospital will be assigned as *Other* and the network will be assigned as the network associated with the first episode. When the place of birth is the site of a closed unit the hospital will be assigned as *Other* and the network will be assigned as the network responsible for that location.

In cases where a baby is transferred, categorisation of a patient is made using episodes that are not held by the unit that has been attributed the patient. All units that care for a baby that meets the inclusion criteria for this measure are responsible for updating episodic data, even if they have not been finally attributed the patient. We therefore ask all units to review the 'PHVD Responsible' tab on the RAD and ensure they are cleaned for other units' data.

Deriving outcomes

The analysis will be based on cranial ultrasound imaging data. Where no imaging is recorded for a baby, this will be reported as Missing Data.

Where babies have scans on the system, but the scan contains no relevant data, they will be listed as Missing Data.

The outcomes will be reported according to the following definition, which is also visible in the Badger system:

Post-haemorrhagic ventricular dilatation

At any time during the infant's stay:

- On any ultrasound or MR imaging, performed at any time during the stay, was the following diagnosed:
- Intraventricular haemorrhage (past or residual) with enlarged ventricles: VI >97th centile +4mm.

BadgerNet data source

In the discharge details section of BadgerNet, professionals discharging a baby are asked to complete the following:

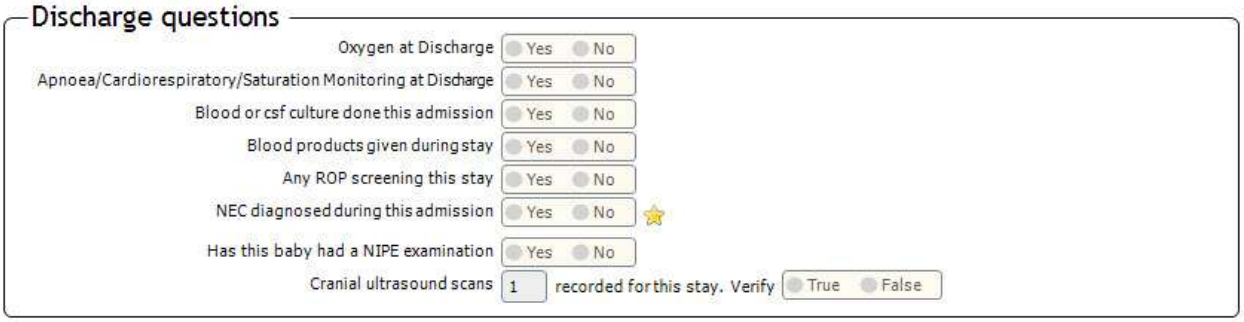


Figure 17: Discharge details section of BadgerNet.

Clinical staff are asked to ensure the scan data recorded adequately describes the scan findings, according to the classification system described above, for eligible babies.

The scan should be recorded using the cranial ultrasound section of the "Procedures/ events tab". Findings from the examination should be recorded as below:

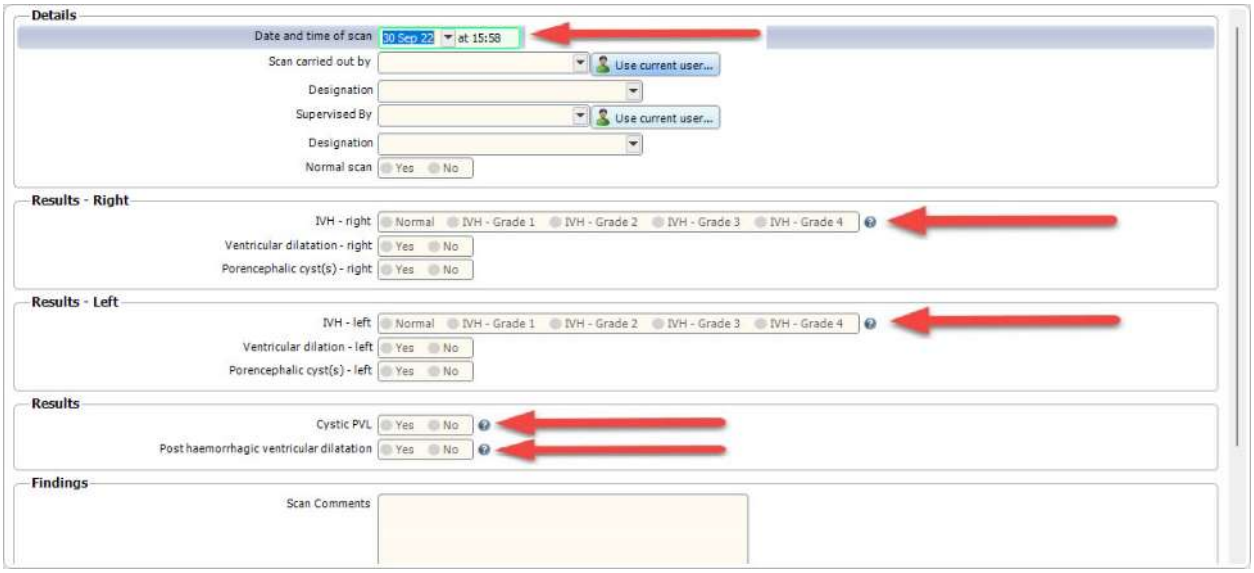


Figure 18: Procedures/events tab, BadgerNet.

Important note: Entering cranial ultrasound scans on BadgerNet

We are aware of an issue with BadgerNet which means that you can't add a cranial ultrasound scan record via the Procedures/events tab in the BadgerNet client if a baby cared for in your unit went on to have a subsequent episode in another unit. System C are aware of this and are working on a fix, however in the meantime you can use the "smart search" function and search for "cranial" to add a new note to the desired episode of care. If you have any questions about how to do this, please do get in touch with System C directly.

Please also note that details entered into BadgerNet EPR's Detailed Cranial Ultrasound form are not currently included in the analysis.

4 Parental consultation within 24 hours of every admission

Is there a documented consultation with parents by a senior member of the neonatal team, within 24 hours of admission?* [3,4,5]

**By senior member of the neonatal team, NNAP means a consultant or middle grade doctor, or a nurse practitioner acting in such a role.*

Change to the audit measure for 2025data year: None.

NNAP standard

Developmental standard: A consultation should take place within 24 hours of admission for every admission (100%).

Source of standard: NNAP Project Board

Subject to outlier identification: *No.*

Comparison standard for outlier analysis: *N/A*

Inclusion criteria

Admissions to neonatal units lasting at least 12 hours and receiving special care or a higher order of neonatal care. Babies receiving neonatal care in non-neonatal unit locations (postnatal ward, transitional care etc.) will not be included. Babies admitted to a neonatal unit, or units, more than once will count as having had more than one admission.

Denominator: Number of admissions to neonatal units lasting at least 12 hours and receiving special care or a higher order of neonatal care, with complete consultation data.

Numerator: Number of admissions to neonatal units lasting at least 12 hours and receiving special care or a higher order of neonatal care with a documented consultation with parents by a senior member of the neonatal team within 24 hours of admission. Presented as a proportion.

Cohort: Admissions in the calendar year of analysis.

Attribution

Results will be attributed to the neonatal unit and network of admission.

Deriving outcomes

The recorded time for first consultation with a senior member of staff is compared to the time of admission to determine when consultation takes place. The NNAP standard is aimed specifically at consultation at or after the time of admission, and so consultations prior to admission or birth cannot meet the NNAP standard (Table).

Table 10: Categorising consultation with parents from BadgerNet fields Parents seen by senior staff and Time first seen

Time of first consultation	NNAP category
Before admission	Before admission
Time of admission – 24 hours after admission	Within 24 hours (NNAP standard)
More than 24 hours after admission	After 24 hours
Confirmed "no consultation"	No consultation
Confirmed "unknown"	Missing
Consultation time not recorded	Missing

BadgerNet data source

Details on first consultation are captured on BadgerNet on the *Details at Birth and Admission* page. The answer to the question *Parents seen by senior staff* and the *Time first seen* are used by NNAP for analysis.

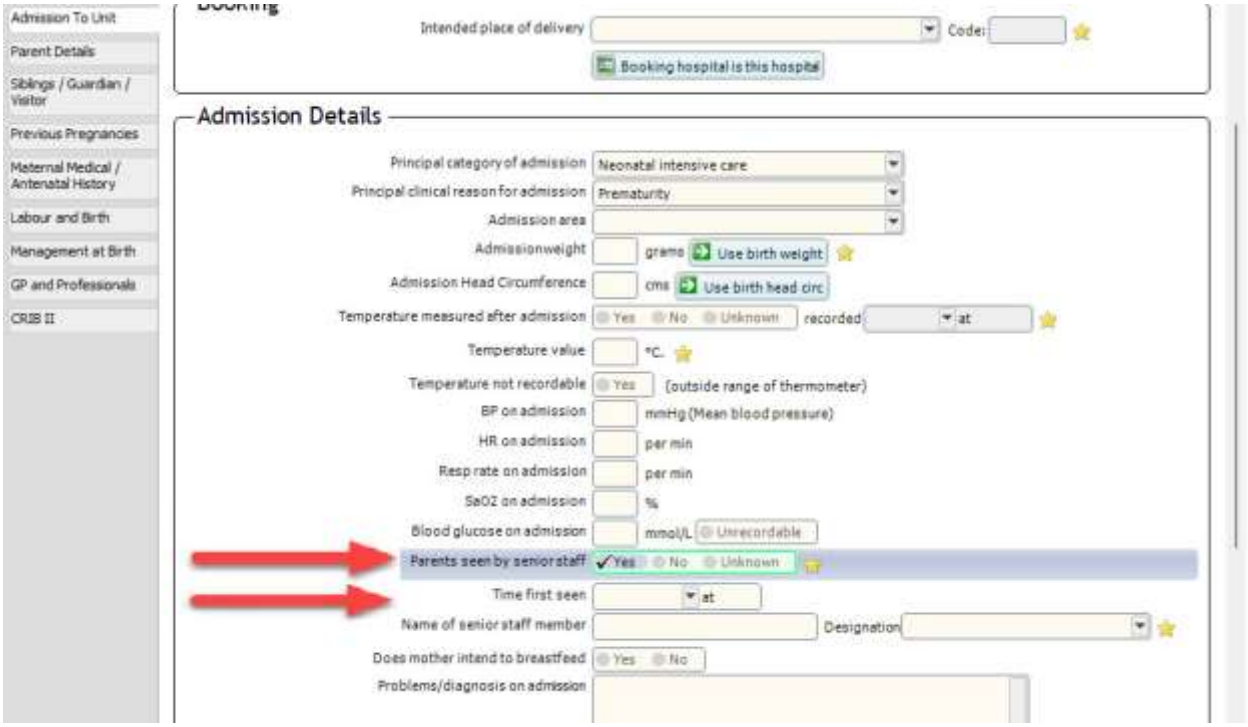


Figure 19: Details at birth and admission page, BadgerNet

5 Parental inclusion in consultant ward rounds

What proportion of baby care days had a consultant-led ward round with at least one parent included?

**Consultant ward round refers to any ward round where a consultant is in attendance, at any time of the day.*

Change to the audit measure for 2025 data year: None.

- In 2023, the first part of the measure was removed and there is now only one part to the measure: "What proportion of baby care days had a consultant-led ward round with at least one parent included?". The denominator for this measure was expanded to include days on which a consultant ward round did not occur.

NNAP standard

Developmental standard: Benchmarking only.

Subject to outlier identification: *No.*

Comparison standard for outlier analysis: *N/A*

Inclusion criteria

Care days from all admissions to neonatal units that are at least one full calendar day in length (midnight to midnight). All full calendar days from each eligible admission for a baby will be included. Ward days on non-neonatal unit locations (postnatal ward, transitional care etc.) will not be included.

Denominator: Number of care days from all admissions to neonatal units that are at least one full calendar day in length (midnight to midnight) and have complete consultation data.

Numerator: Number of care days from all admissions to neonatal units that are at least 24 hours in length with at least one parent present on the consultant ward round. Presented as a proportion.

Cohort: Babies who experienced their final neonatal discharge in the calendar year of analysis.

Attribution

Attribution will be to the neonatal unit providing care in each eligible admission.

Deriving outcomes

NNAP will use data captured as part of the daily summary of care to confirm parental presence on consultant led ward rounds (Table).

Table 11: Categorising parental presence at consultant ward rounds from BadgerNet field Parent present on consultant ward round today?

Parent present on consultant ward round today?	NNAP category
Yes, parent was present for consultant ward round	Parent present
No, parent was not present for consultant ward round	Parent not present
No, no consultant ward round occurred today	Parent not present

Blank	Missing

BadgerNet data source

Details on daily parental presence on ward rounds are captured on BadgerNet in daily summary forms in the *Parent present on consultant ward round today?* field. A form can be created for each baby for each calendar day when they are an inpatient, and NNAP will consider all of the forms created.

Details on daily parental presence on ward rounds can also be captured in the BadgerNet EPR system under the clinical review section, where *Reason for Review* is listed as Ward Round and the *Consultant Ward Round* and *Parent Present at Review* fields are completed.

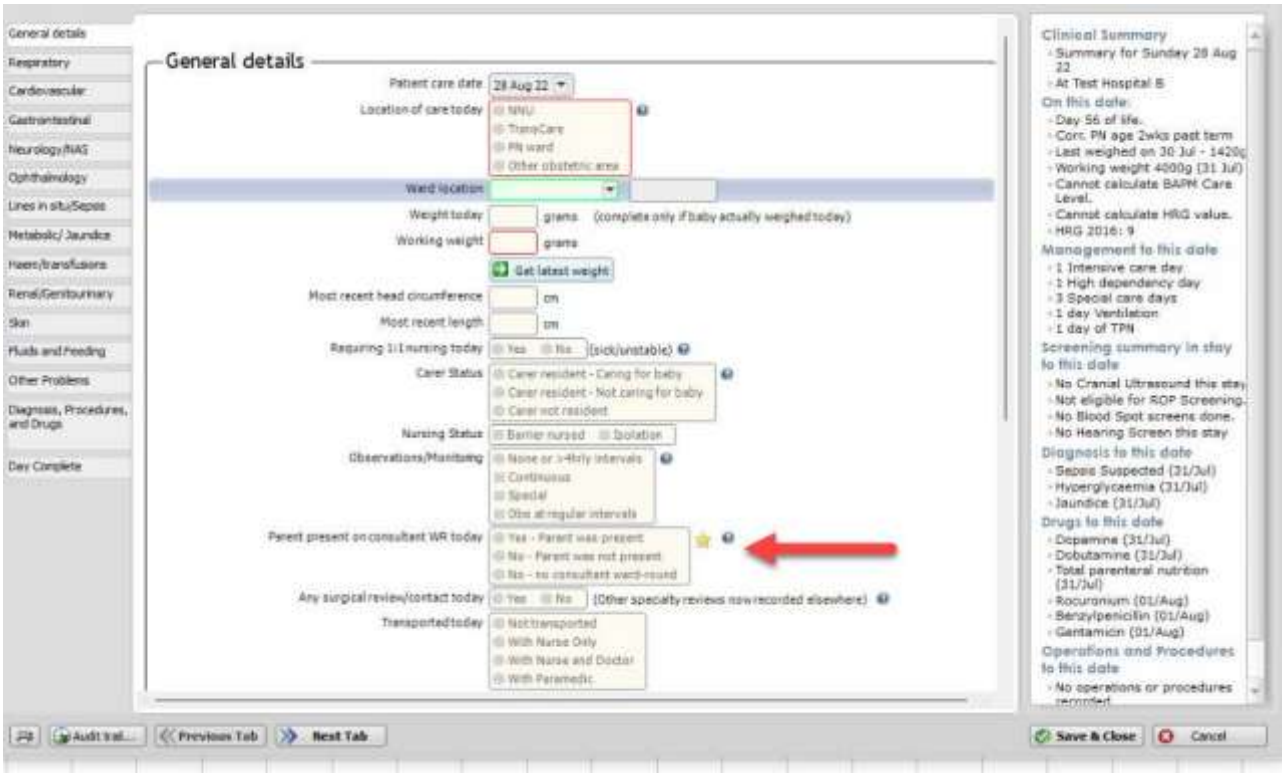


Figure 20: Daily summary, BadgerNet

6 Breastmilk feeding composite metric

Does a baby born at less than 34 weeks gestational age receive any of their own mother's milk:
a) At day 14 of life, and
b) At discharge to home from a neonatal unit?

Change to the audit measure for 2025 data year: None.

NNAP standard

Developmental standard: Benchmarking only.

Subject to outlier identification: *No.*

Comparison standard for outlier analysis: *N/A*

Inclusion criteria

Babies admitted to a neonatal unit whose birth gestation is between 22 and 33 weeks inclusive, and who survive to discharge or day 14.

Denominator: Number of babies admitted to a neonatal unit whose birth gestation is between 22 and 33 weeks inclusive, and who survive to discharge or day 14 with non-missing breastmilk data (see Table).

Numerator: Number of babies admitted to a neonatal unit whose birth gestation is between 22 and 33 weeks inclusive, and who survive to discharge or day 14, who receive any of their own mother's milk on day 14 of life and on their date of discharge. Presented as a proportion.

Cohort: Babies who experienced their final neonatal discharge in the calendar year of analysis.

Attribution

- Babies will be attributed to their location of care at 48 hours of life, which is intended as a proxy measure of the intention to provide ongoing care for a baby in a given neonatal unit.
- When a baby is in transit between units at 48 hours of life the baby will be assigned to the transferring hospital. When multiple admission locations exist at 48 hours of life, the baby will be attributed to the earliest associated admission time.

Deriving outcomes

Table 12: Classification of outcome for the breastmilk feeding composite metric based on breastmilk feeding at day 14 and breastmilk feeding at discharge

Composite metric		Breastmilk at discharge			
		adherent	non-adherent	missing	ineligible
Breastmilk day 14	adherent	adherent	non-adherent	missing	adherent
	non-adherent	non-adherent	non-adherent	non-adherent	non-adherent
	missing	missing	non-adherent	missing	missing
	ineligible	adherent	non-adherent	missing	ineligible

6.1 Breastmilk feeding at day 14

Does a baby born at less than 34 weeks' gestational age receive any of their own mother's milk at day 14 of life?

Change to the audit measure for 2025 data year: None.

NNAP standard

Developmental standard: Benchmarking only.

Subject to outlier identification: *No.*

Comparison standard for outlier analysis: *N/A*

Inclusion criteria

Babies born between 22 and 33 weeks gestational age who survive to their 14th day of life on a neonatal unit.

Denominator: Number of babies born between 22 and 33 weeks gestational age who survive to their 14th day of life on a neonatal unit and have complete feeding data on the 13th, 14th, or 15th day of life.

Numerator: Number of babies born between 22 and 33 weeks gestational age who receive any of their own mother's milk on day 14 of life.

Cohort: Babies who experienced their final neonatal discharge in the calendar year of analysis.

Attribution

- Babies will be attributed to their location of care at 48 hours of life, which is intended as a proxy measure of the intention to provide ongoing care for a baby in a given neonatal unit.
- When a baby is in transit between units at 48 hours of life the baby will be assigned to the transferring hospital. When multiple admission locations exist at 48 hours of life, the baby will be attributed to the earliest associated admission time.
- In cases where a baby is transferred, categorisation of a patient is made using episodes that are not held by the unit that has been attributed the patient. The hospital that cares for the patient upon 48 hours of life is responsible for updating episodic data, even if they have not been finally attributed the patient. We therefore ask all units to review the 'BMD14 Responsible' tab on the RAD and ensure they are cleaned for other units' data.

Deriving outcomes

Babies will be classified as meeting the NNAP standard if they are noted to have received any of the following types of enteral feed on their 14th day of life.

- Suckling at the breast
- Mother's fresh expressed breastmilk
- Mother's frozen expressed breastmilk

BadgerNet data source

The primary source for information on feeding at discharge is daily summary data on enteral feeds for the 14th day of neonatal care on the BadgerNet system. When enteral feeding data is missing for the 14th day, data from 13th or 15th day of care will be used instead (the most positive result will be used).

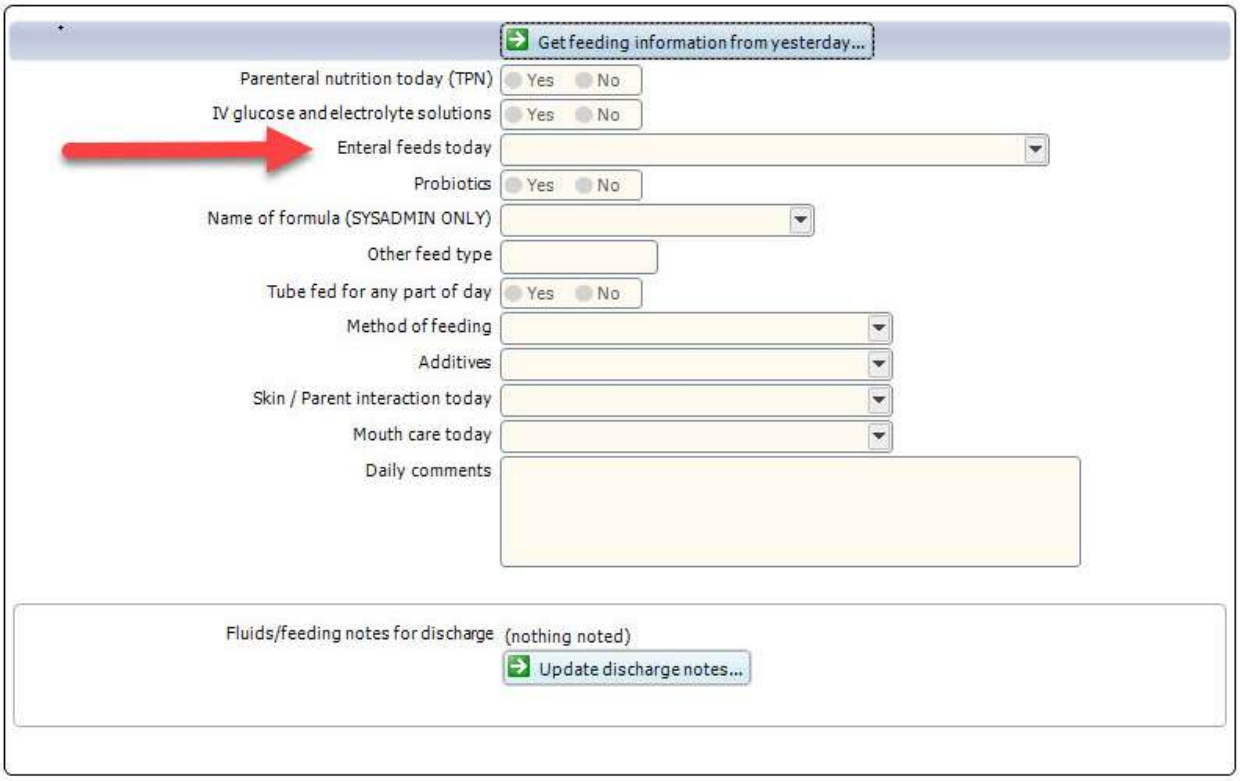


Figure 21: Daily summary data, BadgerNet.

6.2 Breastmilk feeding at discharge home

Does a baby born at less than 34 weeks' gestational age receive any of their own mother's milk at discharge to home from a neonatal unit?

Change to the audit measure for 2025 data year: None.

NNAP standard

Developmental standard: At least eighty percent (80%) of babies born at less than 34 weeks' gestational age should receive at least some of their mother's milk at discharge home from the neonatal unit.

Source of standard: By consensus, in consultation with BAPM.

Subject to outlier identification: *No.*

Comparison standard for outlier analysis: *N/A*

Inclusion criteria

Babies born between 22 and 33 weeks gestational age who are discharged home alive.

Denominator: Number of babies born between 22 and 33 weeks gestational age who are discharged home alive with complete feeding data on their last or penultimate day of care.

Numerator: Number of babies born between 22 and 33 weeks gestational age who receive any of their own mother's milk at discharge.

Cohort: Babies who experienced their final neonatal discharge in the calendar year of analysis.

Attribution

Attribution will be to the neonatal unit of final discharge.

Deriving outcomes

Babies will be classified as meeting the NNAP standard if they are noted to have received any of the following types of enteral feed on their final day of care:

- Suckling at breast
- Mother's fresh expressed breast milk
- Mother's frozen expressed breast milk.

Data will be presented subdivided by rates of breastfeeding, and breastmilk feeding by bottle.

BadgerNet data source

The primary source for information on feeding at discharge is daily summary data on enteral feeds for the last day of neonatal care on the BadgerNet system. When enteral feeding data is missing for the final day, data from the penultimate day of care will be used instead.

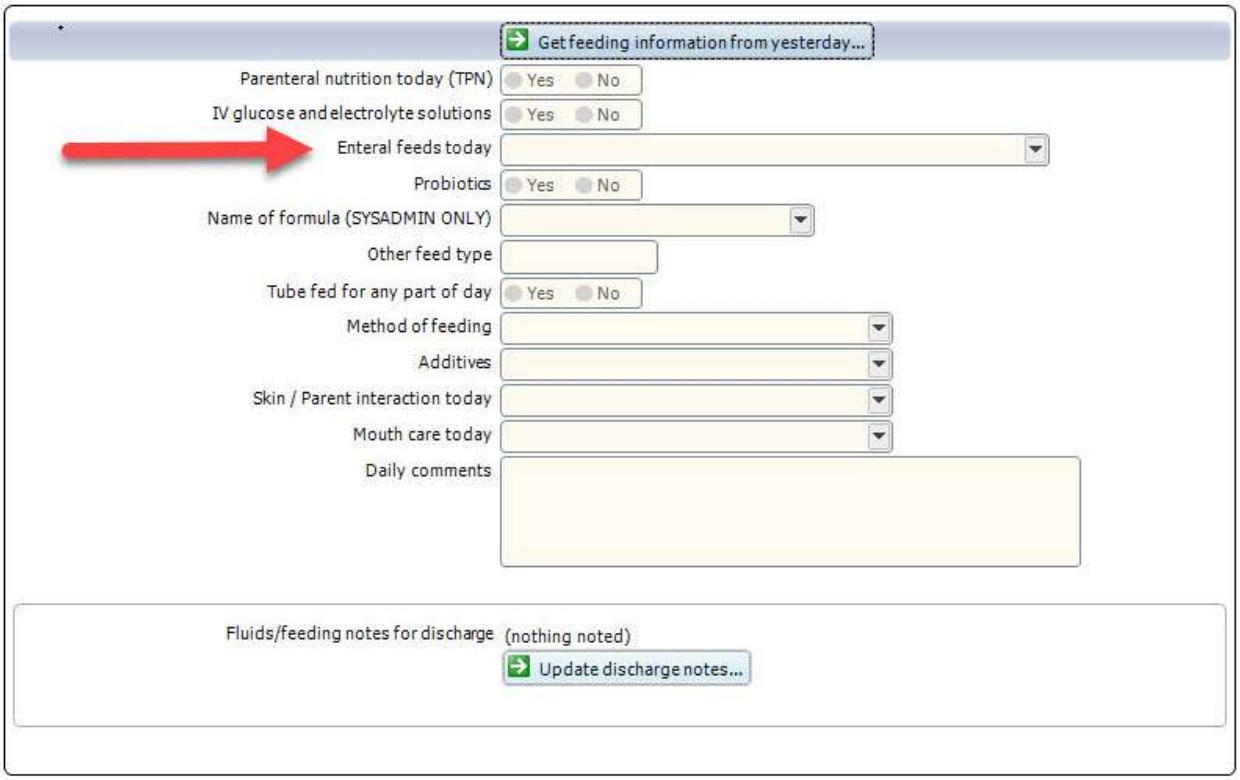


Figure 22: Daily summary form, BadgerNet

7 Follow-up at two years metric

Does a baby born at less than 30 weeks gestational age receive medical follow-up at two years gestationally corrected age (18-30 months' gestationally corrected acceptable age range)? [6]

Does a baby have complete results of a structured assessment recorded? [6]

Change to the audit measure for 2025 data year: None.

NNAP standard

Developmental standard: At least ninety percent (90%) of babies with two-year follow-up data entered.

Subject to outlier identification: *Yes.*

Comparison standard for outlier analysis: *National proportion.*

Inclusion criteria

Babies admitted to a neonatal unit whose gestational age at birth is between 22 and 29 weeks inclusive, and who are not recorded as having died in their episodic data.

Denominator: Number of babies admitted to a neonatal unit whose gestational age at birth is between 22 and 29 weeks inclusive, and who are not recorded as having died in their episodic data.

Numerator: Number of babies admitted to a neonatal unit whose gestational age at birth is between 22 and 29 weeks inclusive, and who are not recorded as having died prior to discharge in their episodic data, who received a medical follow up at two years gestationally corrected age or died post discharge. Presented as a proportion.

Cohort: The eligible cohort runs from July to June each year, for babies who would have reached two years corrected age since the last annual report. Current and projected denominator periods are shown in Table 11.

Table 13: Categorising eligible babies for follow-up at two years of age

NNAP data year	Two-year assessment cohort: Time of birth (inclusive)
2023	July 2020 to June 2021
2024	July 2021 to June 2022
2025	July 2022 to June 2023

Attribution

Attribution will be to the neonatal unit of final discharge. When the unit of final neonatal discharge home cannot be ascertained, two-year data is assigned to the last known episode of neonatal care.

Deriving outcomes

Assessment data will be considered for analysis if it took place between 18 and 30 months corrected age for the infant. This is calculated using assessment date, date of birth and

gestational age at birth. If the assessment date is not recorded, the infant will be classified as *Outside of date range*.

Table 14: Categorising two-year follow-up data

Two-year follow-up outcome form	NNAP category
Any two-year follow-up health data entered	Health data entered
Lost to follow-up	No health data entered: Lost to follow-up
Died post discharge	Health data entered
Responsibility of another unit	No health data entered: Not assessed for other reason
Local decision not to follow-up	No health data entered: Not assessed for other reason
Empty follow-up form / No follow up form	No health data entered: No health data entered at all
Assessment occurred outside 18-30 months corrected gestational age	Assessment outside of range

BadgerNet data source

Data from the two-year follow-up form will be used to analyse assessment data. Which sections are used for each part of the analysis is indicated below by the coloured arrows:

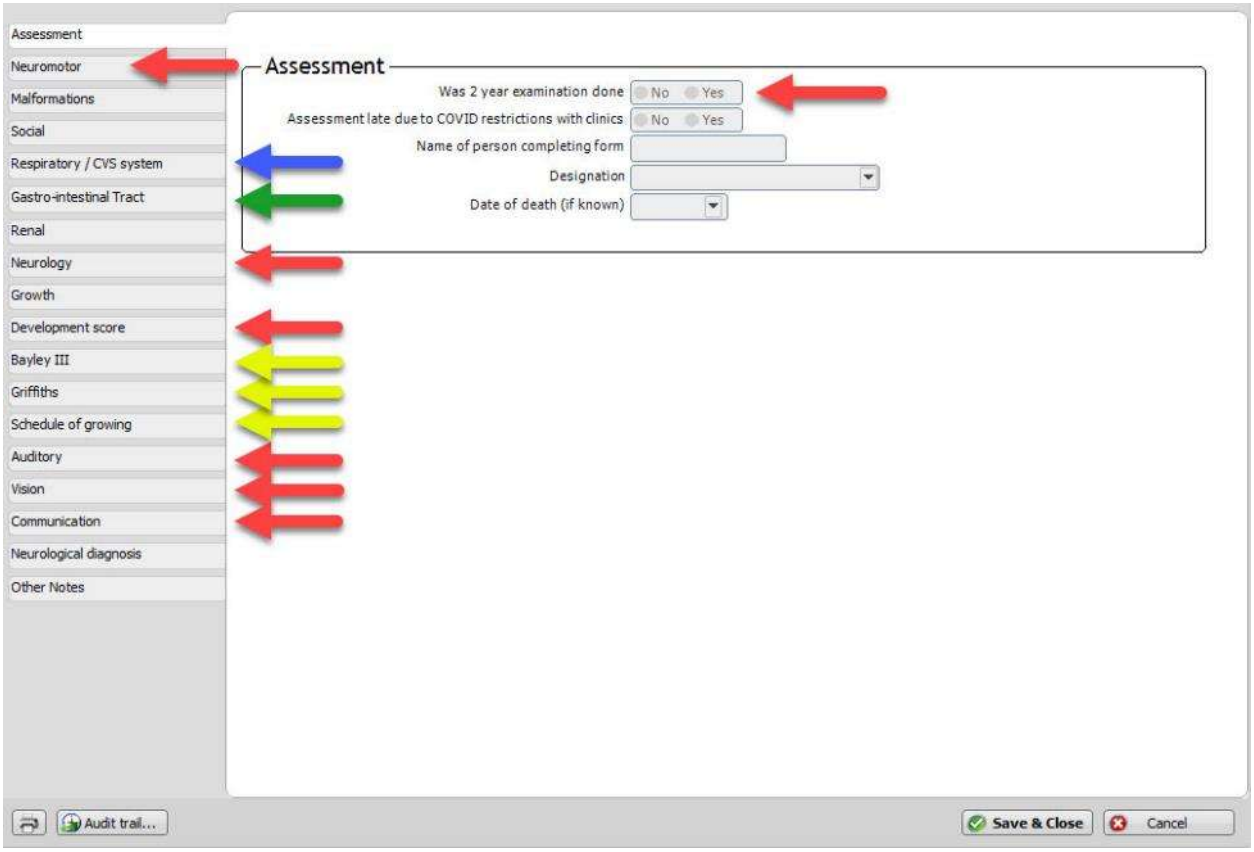


Figure 23: Two-year follow-up form, BadgerNet

Red: Assessment data and neurodevelopmental outcomes
Blue: Respiratory outcomes
Green: Gastrointestinal outcomes
Yellow: Standardised assessment data

8 On-time screening for retinopathy of prematurity

Does a baby born at less than 31 weeks gestational age, or weighing less than 1501g at birth undergo the first ROP screening according to the guideline? [7]

Change to the audit measure for 2025 data year: None.

NNAP standard

Developmental standard: Eighty percent (80%) of eligible babies should receive ROP screening within the recommended time windows for first screening.

Note that the Guideline recommends that all (100%) of eligible babies should receive ROP screening within the recommended time windows for first screening.

Source of standard: NNAP Project Board consensus. National standard (RCPCH, *UK Screening of Retinopathy of Prematurity Guideline, 2022*. [7]

Subject to outlier identification: *Yes.*

Comparison standard for outlier analysis: *National proportion.*

Table 15: ROP screening window

Gestational age at birth (completed weeks)	National guideline ROP screening window[10]
Less than 31 weeks' gestational age	31+0 and 31+6 weeks' postmenstrual age, or at 4 completed weeks' postnatal age (28-34 days), whichever is later.
At or after 31 weeks' gestational age, with birthweight less than 1501g	36 weeks' postmenstrual age or 4 completed weeks' postnatal age (28–34 days), whichever is sooner.

Inclusion criteria

Babies admitted to a neonatal unit whose birth gestation is between 22 and 30 weeks inclusive, or whose birth weight was less than 1501g and alive at the beginning of the national guideline screening window.

Denominator: Number of babies admitted to a neonatal unit whose birth gestation is between 22 and 30 weeks inclusive, or whose birth weight was less than 1501g and alive at the beginning of the national guideline screening window.

Numerator: Number of babies admitted to a neonatal unit whose birth gestation is between 22 and 30 weeks inclusive, or whose birth weight was less than 1501g and alive at the beginning of the national guideline screening window, who were screened in line with national guidance. Presented as a proportion.

Cohort: Babies who experienced their final neonatal discharge in the calendar year of analysis

Attribution

ROP screenings will be attributed to the unit completing the earliest screening within the screening window.

If a baby is not screened within the window, they are assigned to the neonatal unit of care at the time that the screening window closed, or the neonatal unit of final discharge when the infant was discharged before the closure of the screening window.

Babies who died before the end of screening window, and who do not have a record of being "Screened on time" will not be attributed to a unit.

Deriving outcomes

ROP status will be derived from the ad–hoc and daily summary of care sections of BadgerNet to confirm if a screening took place and whether it took place during the NNAP ROP screening window (Table).

Table 16: ROP screening categories

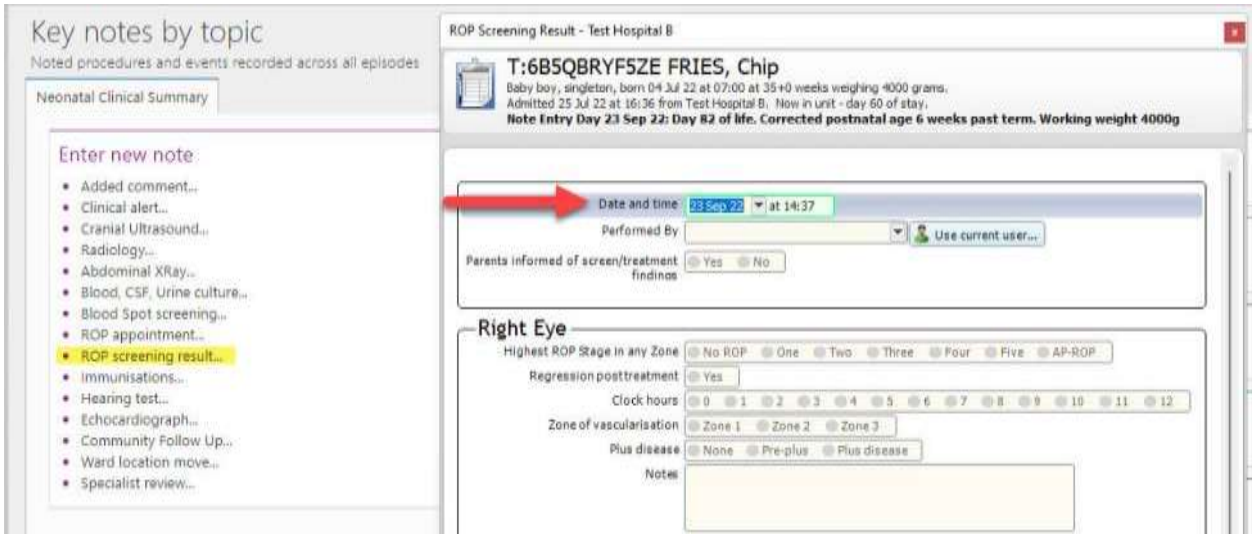
These categories are totalled to **give 'Any screen':**			No screening data
Within ROP screening window	Only before ROP screening window opened*	Only after ROP screening window	No ad-hoc ROP form or ROP screen data on daily care summary
Screened on time	Screened early	Screened late	No screening data

**Babies screened both before and after the window, but not within, are classified as "Screened early".*

BadgerNet data source

Details on ROP screenings are captured on BadgerNet via ad-hoc forms for ROP screening and from the daily summary form when *ROP screen today* is answered *Yes*. Where evidence of ROP screening is available from both sources for the same day ad-hoc screening data will be used preferentially.

Dates from both the ad-hoc and the daily summary forms are used to determine the date of the screening. The time of the screen is not taken into account when calculating ROP screening windows and screens.



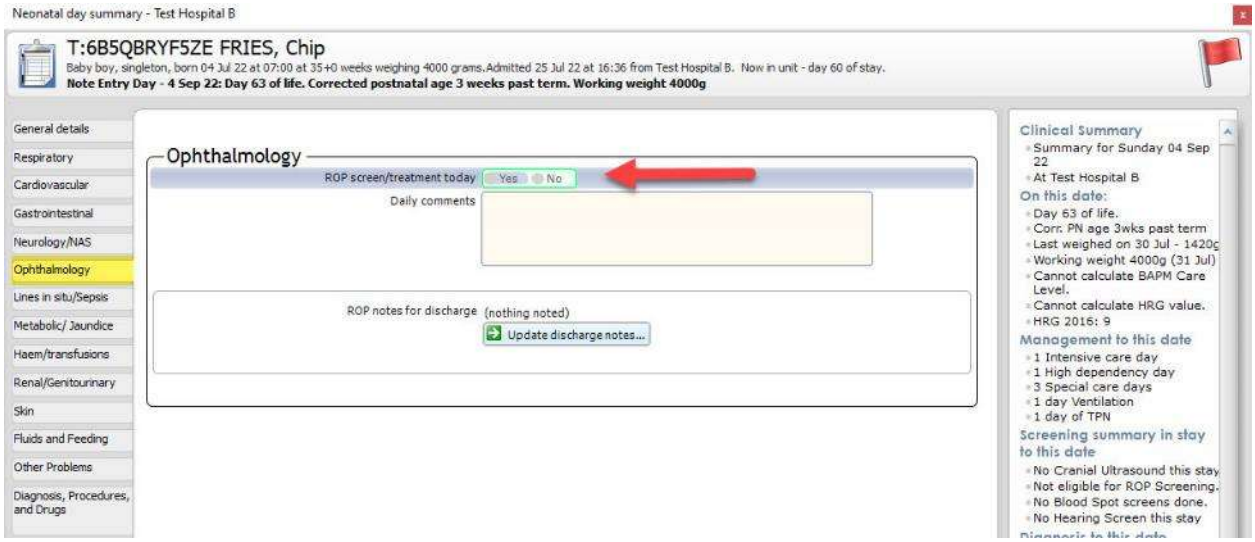


Figure 24: Ad-hoc form for ROP screening (top) and daily summary form (bottom), BadgerNet

9 Nurse staffing on neonatal units

What proportion of nursing shifts are numerically staffed according to guidelines and service specification? [8]

Change to the audit measure for 2025 data year: None.

NNAP standard

Developmental standard: 100% of shifts staffed according to guidelines and service specification.

Subject to outlier identification: *No.*

Comparison standard for outlier analysis: *N/A*

Inclusion criteria

Number of shifts (data collection instrument and measure based on a two-shift model of each calendar day).

Denominator: Number of shifts with complete cot occupancy and nurse numbers from the "Registered Nurses, qualified in specialty" field.

Numerator: Number of shifts where nurse staffing met or exceeded service specification rules (1:1 intensive care; 1:2 high dependency care; 1:4 special care; additional shift coordinator)[8].

Cohort: Shifts within calendar year of analysis.

Attribution

Attribution will be to the neonatal unit.

Deriving outcomes

A "nurse" is a member of non-medical staff with an allocated patient workload, or acting as a coordinator, with or without Nursing and Midwifery Council (NMC) registration, with or without a qualification in speciality. Staff members without allocated patients, such as housekeepers, research nurses, nurses in primarily educational roles are specifically excluded.

The BadgerNet nurse fields included in this analysis are: Shift leader, Registered Nurses QIS, Registered Nurses not QIS, Registered Nurses undertaking QIS training, Associate nurses, Non registered nurses.

When entering data about partially worked day shifts, units should enter early or late shifts as follows: where a nurse is only present for an "early" or "late" part of a day shift, record as 0.5 shift.

Additionally, any units with less than or equal to 25% data completeness across all their entered shifts will be removed from the measure. This completeness is assessed based on completion of the "Registered Nurses, qualified in specialty" field.

Use the guidance *Safe, sustainable and productive staffing: An improvement resource for neonatal care* to support data completion.

Note: Units should not tick the "Include TC babies" box when entering their nursing data.

BadgerNet data source

Data from the Nursing numbers update form (Figure) in BadgerNet will be used for this measure. The Nursing numbers update form is found within the Unit report section.

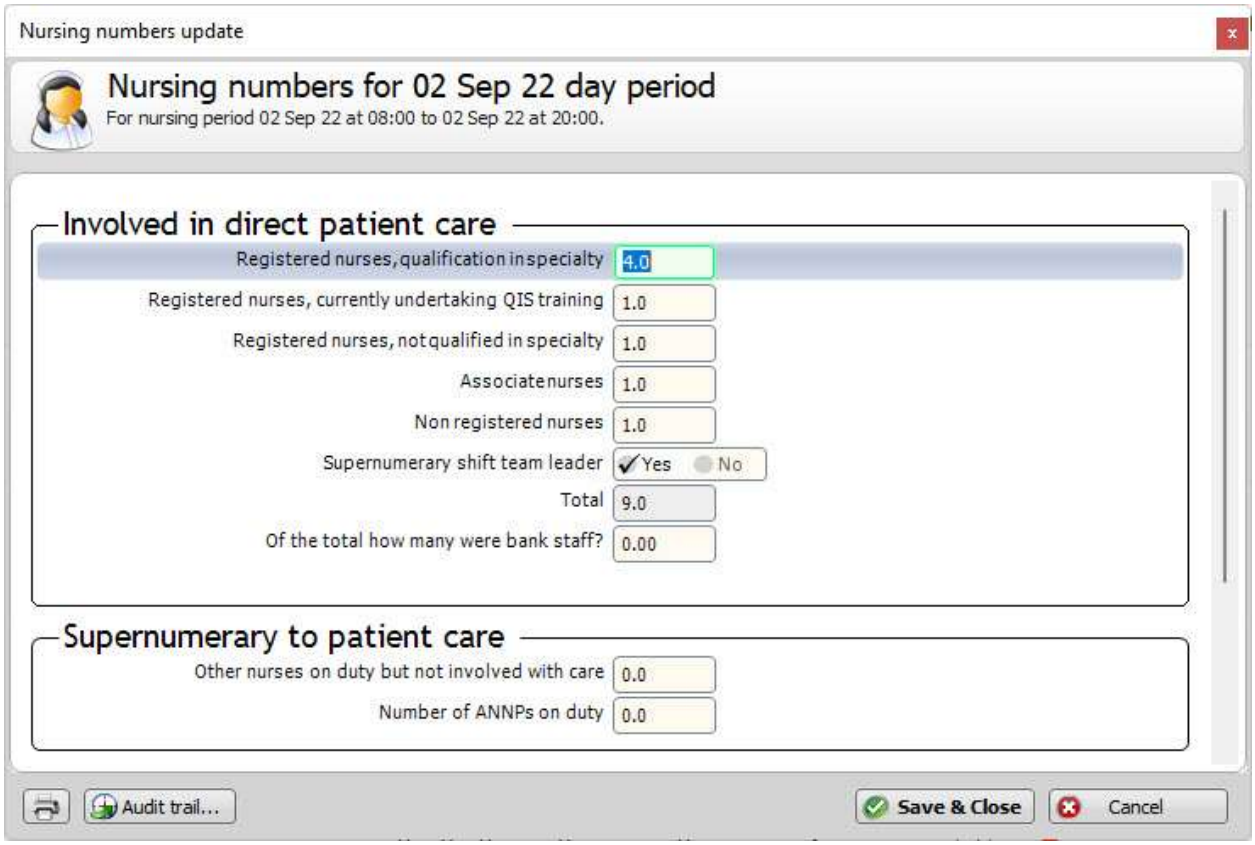


Figure 25: Nursing numbers update form, BadgerNet

Data entered into the form is summarised in the Neonatal Unit Nursing Numbers report (Figure).

Period	Nurses caring for patients							Cot occupancy						Nurses required		QIS Required (IC & HD)		
	With qual.	Assoc	Undertaking QIS	Without qual.	Not Reg.	Team Leader	Total	Bank Staff	IC	HD	SC	Admissions	Discharges	BAPM Recommends	Difference	Toolkit recommends	Difference
01 Sep 22 Day	8	1	1	1	1	1	13	3	0	0	0	0	0	1	12(0) (1,200%)	0	9
Night	8	1	1	1	1	1	13	3	0	0	0	0	0	1	12(0) (1,200%)	0	9
02 Sep 22 Day	4	1	1	1	1	1	9	0	0	0	0	0	0	1	8(0) (800%)	0	5
Night	Update...								0	0	0	0	0	1	-1(-1) (-100%)	0	0
03 Sep 22 Day	Update...								0	0	0	0	0	1	-1(-1) (-100%)	0	0
Night	Update...								0	0	0	0	0	1	-1(-1) (-100%)	0	0

Figure 26: Neonatal unit nursing numbers, BadgerNet

10 Non-invasive breathing support

What proportion of babies born at less than 32 weeks' gestation only receive non-invasive breathing (or respiratory) support during the first week of life?*

**Invasive respiratory support is defined as that delivered through an endotracheal tube.*

Change to the audit measure for 2025 data year: None.

NNAP standard

Developmental standard: None

Subject to outlier identification: *To be confirmed.*

Comparison standard for outlier analysis: *TBC*

Inclusion criteria

Babies admitted to a neonatal unit whose birth gestation is between 22 and 31 weeks inclusive who survived to day 8 of life and did not have surgery in the first week of life. Episodes in the first week of life will be considered for analysis.

Denominator: Number of babies admitted to a neonatal unit whose birth gestation is between 22 and 31 weeks inclusive, who survived to day 8 of life, who have complete respiratory support data each of their first 7 days, and who did not have surgery in the first week of life.

Numerator: Number of babies admitted to a neonatal unit whose birth gestation is between 22 and 31 weeks inclusive who survived to day 8 of life and did not have surgery in the first week of life, who only received non-invasive respiratory support during the first week of life. Presented as a proportion.

Cohort: Babies who experienced their first admission in the calendar year of analysis.

Attribution

Results will be attributed to the hospital and network of birth.

When the place of birth is listed as *Home* or *Transit* the hospital and network will be assigned as the provider of their earliest episode. When the place of birth is the site of a closed unit, the hospital will be assigned as *Other* and the network will be assigned as the network responsible for that location.

Deriving outcomes

Outcomes will be derived from the "respiratory support" field of the day summary forms from the first seven days of a baby's care. The numerator is babies who only receive non-invasive respiratory support (*"no ventilation/no CPAP"* or "*non-invasive support (inc. CPAP)"*) on all of the first seven days of life.

Babies born at or after 23:00 hours will have respiratory data from their first day of life imputed to match respiratory data from their second day of life, if data from their first day of life is missing. This is to account for babies born the day before their first admission to a neonatal unit.

Presenting the data

Type and duration of respiratory support unit and network results are balanced on gestational age. Balancing is a process that compares the babies at each unit to babies from the national population whose results are weighted to create the same gestational age mix as the unit of comparison.

The weighted national result (referred to as the “balanced proportion”) is then compared to the unit’s result (referred to the “observed proportion”), with the difference between their proportions referred to as the “treatment effect”. A positive treatment effect indicates that babies at the unit would have been more likely to receive only non-invasive respiratory support had they been treated elsewhere, and a negative treatment effect indicates that they would have been less likely to receive only non-invasive respiratory support elsewhere.

BadgerNet data source

Details on type of respiratory support are captured on BadgerNet on the Day summary form, indicating type of respiratory support provided on the day.

Glossary of terms and abbreviations

BAPM	The British Association for Perinatal Medicine improves standards of perinatal care by supporting all those involved in perinatal care to optimise their skills and knowledge, promote high quality, safe and innovative practice, encourage research, and speak out for the needs of babies and their families. https://www.bapm.org/
BPD	Bronchopulmonary dysplasia
Bliss	Bliss is a national charity for babies born premature or sick. It exists to give every baby born premature or sick in the UK the best chance of survival and quality of life. Bliss supports families, campaigns for change, supports professionals, and enables life-changing research. https://www.bliss.org.uk
DCC	Deferred cord clamping
GIRFT	Getting It Right First Time (GIRFT) is a national programme designed to improve the treatment and care of patients through in-depth review of services, benchmarking, and presenting a data-driven evidence base to support change[9].
HQIP	The Healthcare Quality Improvement Partnership (HQIP) aims to promote quality improvement in patient outcomes, and in particular, to increase the impact that clinical audit, outcome review programmes and registries have on healthcare quality in England and Wales. HQIP is led by a consortium of the Academy of Medical Royal Colleges, the Royal College of Nursing and National Voices. https://www.hqip.org.uk/
HRG	Healthcare resource group: Standard groupings of clinically similar treatments which use common levels of healthcare resource.
Hyperthermia	A body temperature more than 37.5°C
Hypothermia	A body temperature less than 36.5°C
LNU	Local neonatal units (LNUs) provide neonatal care for their own catchment population, except for the sickest babies. They provide all categories of neonatal care, but they transfer babies who require complex or longer-term intensive care to a NICU, as they are not staffed to provide longer-term intensive care. Most babies over 27 weeks gestational age will usually receive their full care, including short periods of intensive care, within their LNU. Some networks have agreed variations on this policy, due to local requirements. Some LNUs provide high dependency care and short periods of intensive care for their network population. LNUs may receive transfers from other neonatal services in the network, if these fall within their agreed work pattern[10].
MatNeoSIP	The Maternity and Neonatal Safety Improvement Programme (MatNeoSIP), formerly known as the Maternal and Neonatal Health Safety Collaborative, is the programme supporting improvement in the quality and safety of maternity and neonatal units across England. https://www.england.nhs.uk/mat-transformation/maternal-and-neonatal-safety-collaborative/
MBRRACE-UK	Mothers and Babies: Reducing Risk through Audits and Confidential Enquiries across the UK. https://www.npeu.ox.ac.uk/mbrrace-uk

NCAPOP	National Clinical Audit and Patient Outcomes Programme
NEC	Necrotising enterocolitis
NHSE	NHS England
NICE	National Institute for Health and Care Excellence
NICU	Neonatal intensive care units (NICUs) are sited alongside specialist obstetric and feto-maternal medicine services and provide the whole range of medical neonatal care for their local population, along with additional care for babies and their families referred from the neonatal network. Many NICUs are co-located with neonatal surgery services and other specialised services. Medical staff in a NICU should have no clinical responsibilities outside the neonatal and maternity services[10].
NMPA	The National Maternity and Perinatal Audit is a national clinical audit of NHS maternity services in England, Scotland and Wales. The audit, commissioned by HQIP, is led by the Royal College of Obstetricians and Gynaecologists in partnership with the Royal College of Midwives (RCM, the Royal College of Paediatrics and Child Health (RCPCH) and the London School of Hygiene and Tropical Medicine (LSHTM). www.maternityaudit.org.uk
NNAP	National Neonatal Audit Programme
Normothermia	A body temperature between 36.5°C and 37.5°C
ODN	Operational delivery network: In England, managed clinical networks for the coordination of neonatal critical care.
Outlier	A result that is statistically above or below expected performance. The NNAP defines outliers in four categories: • outstanding: three or more standard deviations above expected performance • excellent: between two and three standard deviations above expected performance • alert: between two and three standard deviations below expected performance • alarm: three or more standard deviations below expected performance.
PDSA	Plan, do, study, act
Perinatal	The period before and immediately after birth, here defined as the time from fetal viability up to 28 days after birth.
PERIPrem	Perinatal Excellence to Reduce Injury in Premature Birth https://www.weahsn.net/our-work/transforming-services-and-systems/periprem/
PReCePT	The Prevention of Cerebral Palsy in PreTerm Labour. https://www.weahsn.net/our-work/transforming-services-and-systems/precept/

Preterm	Preterm is defined by the World Health Organisation as a baby born alive before 37 weeks of pregnancy are completed. This definition is sub-categorised by gestational age: • extremely preterm (less than 28 weeks) • very preterm (28 to 32 weeks) • moderate to late preterm (32 to 37 weeks).
QI	Quality improvement
RCPCH	The Royal College of Paediatrics and Child Health (RCPCH) was founded in 1996 and now has over 17,000 members across the world. The RCPCH plays a major role in postgraduate medical education, professional standards, research and policy. https://www.rcpch.ac.uk
RCOphth	Royal College of Ophthalmologists
ROP	Retinopathy of prematurity
SCU	Special care units (SCUs) provide special care for their own local population. Depending on arrangements within their neonatal network, they may also provide some high dependency services. In addition, SCUs provide a stabilisation facility for babies who need to be transferred to a neonatal intensive care unit (NICU) for intensive or high dependency care, and they also receive transfers from other network units for continuing special care[10].

Appendix 1: “Pathogens” in the NNAP

Bacterial, fungal and yeast positive blood cultures reported to the NNAP in 2024 for the late onset bloodstream infection measure have been classified as shown below into organisms whose growth would be regarded as indicative of a bloodstream infection without further clinical evidence of infection (clearly pathogenic), and into a list of other organisms. This list of organisms included for NNAP reporting is available below. The NNAP are grateful to Dr Jim Gray, Consultant Microbiologist at Birmingham Women's and Children's NHS Foundation Trust, who kindly reviewed organisms reportedly cultured in blood, and helped classify them into 'clearly pathogenic' and 'other' organisms.

For more information, see Fraser C, Muller-Pebody B, Blackburn R, Gray J, Oddie SJ, Gilbert RE, Harron K. Linking surveillance and clinical data for evaluating trends in bloodstream infection rates in neonatal units in England. PLoS One. 2019 Dec 12;14(12):e0226040. doi: 10.1371/journal.pone.0226040.eCollection 2019.

Clearly Pathogenic Organisms		
Acinetobacter Baumanii	Acinetobacter Baumannii	Aeromonas Caviae
Aeromonas Hydrophila	Aeromonas Salmonicida	Aeromonas Sobria
Aeromonas Sp	Anaerococcus Prevotii	Aspergillus
Aspergillus Fumigatus	Aspergillus Niger	Aspergillus Sp
B Haemolytic Streptococci	Bacteroides Capillosus	Bacteroides Distasonis
Bacteroides Fragilis	Bacteroides Ovatus	Bacteroides Sp
Bacteroides Uniformis	Bacteroides Vulgatus	C. Koseri
Campylobacter Fetus	Campylobacter Jejuni	Campylobacter Sp
Campylobacter Ureolyticus	Candida	Candida Albicans
Candida Ciferrii	Candida Dubliniensis	Candida Fabianii
Candida Famata	Candida Glabrata	Candida Guilliermondii
Candida Haemulonis	Candida Krusei	Candida Lusitaniae
Candida Parapsilosis	Candida Sp	Candida Sp.
Candida Tropicalis	Cedecea Lapagei	Citrobacter
Citrobacter Amalonaticus	Citrobacter Braakii	Citrobacter Diversus
Citrobacter Farmeri	Citrobacter Freundii	Citrobacter Koseri
Citrobacter Sp	Citrobacter Sp.	Clostridium Beijerinckii
Clostridium Bifermentans	Clostridium Butyricum	Clostridium Paraputrificum
Clostridium Perfringens	Clostridium Septicum	Clostridium Sordelli
Clostridium Sp	Clostridium Sp.	Clostridium Sporogenes
Clostridium Tertium	Coccidioides Sp	Coliform
Cryptococcus Albidus	Cryptococcus Sp	E.Coli
Enterobacter	Enterobacter Aerogenes	Enterobacter Agglomerans
Enterobacter Agglomerans	Enterobacter Amnigenus	Enterobacter Asburiae
Enterobacter Cloacae	Enterobacter Cloacae Complex	Enterobacter Gergovaie
Enterobacter Gergoviae	Enterobacter Hormaechei	Enterobacter Intermedium
Enterobacter Intermedius	Enterobacter Kobei	Enterobacter Sakazakii
Enterobacter Sp	Enterobacter Sp.	Enterococcus Avium
Enterococcus Casseliflavus	Enterococcus Durans	Enterococcus Faecalis
Enterococcus Faecalis	Enterococcus Faecium	Enterococcus Gallinarum
Enterococcus Hirae	Enterococcus Raffinosus	Enterococcus Sp

Enterococcus Sp.	Escherichia	Escherichia Coli
Escherichia Hermannii	Escherichia Sp	Escherichia Vulneris
Extended Spectrum Beta-Lactamase	Fusobacterium Necrophorum	Fusobacterium Nucleatum
Fusobacterium Sp	Gardnerella	Gardnerella Vaginalis
Gbs	Group B Streptococcus	Group G Streptococcus
Haemophilus Influenzae	Hafnia Alvei	Hansenula Sp
Klebsiella	Klebsiella Aerogenes	Klebsiella Ornithnolytica
Klebsiella Oxytoca	Klebsiella Planticola	Klebsiella Pneumoniae
Klebsiella Pneumoniae Subsp Ozenae	Klebsiella Sp	Klebsiella Sp.
Kluyvera Sp	Leclercia Adecarboxylata	Listeria Monocytogenes
Listeria Sp	Malassezia Furfur	Malassezia Pachydermatis
Malassezia Sp	Morganella Morganii	Mrsa
Neisseria Meningitidis	Pantoea Agglomerans	Pantoea Septica
Pantoea Sp	Pasteurella	Pasteurella Haemolytica
Pasteurella Multocida	Pasteurella Pneumotropica	Pasteurella Sp
Pasteurella Sp.	Peptostreptococcus	Peptostreptococcus Asaccharolyticus
Peptostreptococcus Magnus	Prevotella Bivia	Prevotella Buccalis
Prevotella Oralis	Proteus Mirabilis	Proteus Penneri
Proteus Sp	Proteus Sp.	Proteus Vulgaris
Providencia Alcalifaciens	Providencia Stuartii	Pseudomonas Aeruginosa
Raoultella Planticola	Raoultella Planticola	Raoultella Sp
Raoultella Terrigena	Rhodotorula	Rhodotorula Rubra
Rhodotorula Sp	S. Aureus	Salmonella Aba
Salmonella Agama	Salmonella Ajiobo	Salmonella Apapa
Salmonella Arizonae	Salmonella Brandenburg	Salmonella Colindale
Salmonella Cotham	Salmonella Cubana	Salmonella Djugu
Salmonella Dublin	Salmonella Enteritidis	Salmonella Gold-Coast
Salmonella Hadar	Salmonella Heidelberg	Salmonella Hofit
Salmonella Hull	Salmonella Infantis	Salmonella Kedougou
Salmonella Kiambu	Salmonella Kibusi	Salmonella Kintambo
Salmonella Kisarawe	Salmonella Matopeni	Salmonella Mississippi
Salmonella Monschaui	Salmonella Montevideo	Salmonella Muenchen
Salmonella Muenster	Salmonella Newport	Salmonella Oranienburg
Salmonella Poona	Salmonella Reading	Salmonella Saphra
Salmonella Senftenberg	Salmonella Sinstorf	Salmonella Sp
Salmonella Sp.	Salmonella Stanley	Salmonella Tel-El-Kebir
Salmonella Typhi And Paratyphi	Salmonella Typhimurium	Salmonella Unnamed
Salmonella Virchow	Salmonella Vitkin	Salmonella Wichita
Serratia Liquefaciens	Serratia Marcescens	Serratia Odorifera
Serratia Plymuthica	Serratia Proteamaculas	Serratia Rubidaea
Serratia Sp	Serratia Sp.	Shigella Flexneri
Shigella Sonnei	Staphylococcus Aureus	Stellatoidea
Streptococcus Agalactiae	Streptococcus Anaerobic	Streptococcus Anginosus
Streptococcus Bovis	Streptococcus Constellatus	Streptococcus Faecalis
Streptococcus Group A Stem	Streptococcus Group B Stem	Streptococcus Group C Stem
Streptococcus Group D Stem	Streptococcus Group G Stem	Streptococcus Milleri
Streptococcus Milleri Group	Streptococcus Pneumoniae	Streptococcus Pyogenes
Veillonella Atypica	Veillonella Named	Yeasts

Yeasts (Other)	Yersinia Enterocolitica	Yersinia Sp.

Other organisms		
Abiotrophia	Abiotrophia Adiacens	Abiotrophia Adjacens
Abiotrophia Defectiva	Achromobacter Sp	Achromobacter Xylosoxidans
Acidovorax Temperans	Acinetobacter Anitratus	Acinetobacter Calcoaceticus
Acinetobacter Haemolyticus	Acinetobacter Johnsonii	Acinetobacter Junii
Acinetobacter Lwoffii	Acinetobacter Parvus	Acinetobacter Radioresistens
Acinetobacter Sp	Acinetobacter Sp.	Acinetobacter Ursingii
Actinomyces	Actinomyces Bovis	Actinomyces Cardiffensis
Actinomyces Naeslundii	Actinomyces Neuii	Actinomyces Odontolyticus
Actinomyces Oris	Actinomyces Sp	Actinomyces Sp.
Actinomyces Viscosus	Aerococcus Sp	Aerococcus Urinae
Aerococcus Viridans	Agrobacterium Tumefaciens	Alcaligenes Faecalis
Alcaligenes Sp	Alpha Haemolytic Streptococcus	Alternaria Sp.
Anaerobes (Not Specified)	Anitratus	Arcanobacterium Haemolyticum
Arthrobacter Sp	Aurantimonas Altamirensis	Bacillus
Bacillus Cereus	Bacillus Circulans	Bacillus Licheniformis
Bacillus Pumilus	Bacillus Silvestris	Bacillus Sp
Bacillus Sp.	Bacillus Subtilis	Bifidobacterium
Bifidobacterium Adolescentis	Bifidobacterium Breve	Bifidobacterium Catenulatum
Bifidobacterium Longum	Bifidobacterium Sp	Brevibacillus Parabrevis
Brevibacterium	Brevibacterium Casei	Brevibacterium Sp
Brevundimonas Diminuta	Brevundimonas Sp	Brevundimonas Vesicularis
Burkholderia Capecia	Burkholderia Cepacia	Burkholderia Gladioli
Burkholderia Sp.	Capnocytophaga	Chryseobacterium Indologenes
Chryseobacterium Meningosepticum	Chryseobacterium Sp	Chryseobacterium Sp.
Chryseomonas Indologenes	Collinsella Aerofaciens	Comamonas Acidovorans
Comamonas Testosteroni	Cons	Cons (Mixed)
Corynebacterium	Corynebacterium Afermentans	Corynebacterium Amycolatum
Corynebacterium Aurimucosum	Corynebacterium Auris	Corynebacterium Coyleae
Corynebacterium Diphtheriae	Corynebacterium Imitans	Corynebacterium Jeikeium
Corynebacterium Minutissimum	Corynebacterium Mucifaciens	Corynebacterium Propinquum
Corynebacterium Pseudodiphtheriticum	Corynebacterium Simulans	Corynebacterium Sp
Corynebacterium Sp.	Corynebacterium Striatum	Corynebacterium Xerosis
Coryneform Bacilli	Delftia Acidovorans	Dermabacter Hominis
Dermacoccus Sp	Diphtheroids	Eggerthella Lenta
Eikenella Corrodens	Elizabethkingia Miricola	Elizabethkingia Sp
Eubacterium Lentum	Exophiala Sp.	Flavimonas Oryzihabitans
Flavobacterium Sp.	Gemella Haemolysans	Gemella Morbilarum
Gemella Morbillorum	Geotrichum Sp	Globicatella Sanguis
Gordonia Bronchialis	Gordonia Sp	Gram Negative Bacilli
Granulicatella Adiacens	Granulicatella Elegans	Haematobacter Sp
Haemophilus	Haemophilus Aphrophilus	Haemophilus Haemolyticus
Haemophilus Parahaemolyticus	Haemophilus Parainfluenzae	Haemophilus Paraphrohaemolyticus
Haemophilus Sp	Haemophilus Sp.	Kingella Denitrificans
Kingella Kingae	Kingella Sp	Kocuria Kristinae

Kocuria Rhizophila	Kocuria Rosea	Kocuria Sp
Kocuria Species	Kocuria Varians	Kytococcus Schroeteri
Lactobacillus	Lactobacillus Crispatus	Lactobacillus Fermentum
Lactobacillus Gasseri	Lactobacillus Jensenii	Lactobacillus Lactis
Lactobacillus Paracasei	Lactobacillus Rhamnosus	Lactobacillus Sp
Lactobacillus Sp.	Lactococcus Cremoris	Lactococcus Garvieae
Lactococcus Lactis	Lactococcus Sp	Lactococcus Sp.
Leuconostoc Sp	Lysinibacillus Sp	Mallassezia Furfur
Massilia Timonae	Methylobacterium Sp	Microbacterium Aurum
Microbacterium Paraoxydans	Microbacterium Sp	Micrococcus
Micrococcus Luteus	Micrococcus Lylae	Micrococcus Sp
Micrococcus Sp.	Micrococcus Varians	Microsporum Sp
Mixed Growth	Moraxella Catarrhalis	Moraxella Lacunata
Moraxella Nonliquefaciens	Moraxella Osloensis	Moraxella Sp
Moraxella Sp.	Mycobacterium Sp.	Neisseria Cinerea
Neisseria Flavescens	Neisseria Lactamica	Neisseria Mucosa
Neisseria Perflava	Neisseria Polysacchareae	Neisseria Sicca
Neisseria Sp	Neisseria Subflava	Nhs
Oceanobacillus Profundus	Ochrobactrum Anthropi	Ochrobactrum Sp
Paenibacillus Amylolyticus	Paenibacillus Glucanolyticus	Paenibacillus Pabuli
Paenibacillus Sp	Pantoea	Parabacteroides Distasonis
Paracoccus Sp	Paracoccus Yeeii	Pediococcus Acidilactici
Penicillium Sp	Peptococcus Sp	Phialophora
Propionibacterium Acnes	Propionibacterium Freudenreichii	Propionibacterium Sp
Proprionebacterium Acnes	Providencia Rettgeri	Pseudoclavibacter Sp
Pseudomonas Alcaligenes	Pseudomonas Fluorescens	Pseudomonas Luteola
Pseudomonas Oleovorans	Pseudomonas Oryzihabitans	Pseudomonas Paucimobilis
Pseudomonas Putida	Pseudomonas Sp	Pseudomonas Sp.
Pseudomonas Stutzeri	Pseudoxanthomonas Kaohsiungensis	Psychrobacter Phenylpyruvicus
Rahnella Named	Rahnella Sp	Ralstonia Pickettii
Ralstonia Sp.	Rhizobium Radiobacter	Rhodococcus
Rhodococcus Bronchialis	Rhodococcus Sp	Roseomonas Gilardii
Roseomonas Mucosa	Roseomonas Sp	Rothia Aeria
Rothia Dentocariosia	Rothia Sp	Rothia Spp
Ruminococcus Gnavus	Scopulariopsis Brevicaulis	Sphingobacterium Multivorum
Sphingomonas	Sphingomonas Paucimobilis	Sphingomonas Sp
Staph Saprophyticus	Staphylococcus Capitis	Staphylococcus Coagulase Negative
Staphylococcus Epidermidis	Staphylococcus Haemolyticus	Staphylococcus Hominis
Staphylococcus Lugdunensis	Staphylococcus Pettenkoferi	Staphylococcus Simulans
Staphylococcus Sp	Staphylococcus Sp.	Staphylococcus Vitulinus
Staphylococcus Warneri	Stenotrophomonas Acidaminiphila	Stenotrophomonas Maltophilia
Stenotrophomonas Sp	Stephanoascus Ciferrii	Steptococcus Mutans
Stomatococcus Mucilaginosus	Stomatococcus Sp	Streptococcus Alactolyticus
Streptococcus Alpha And Non-Haemolytic	Streptococcus Cristatus	Streptococcus Gordonii
Streptococcus Infantarius Subsp Nov	Streptococcus Infantis	Streptococcus Intermedius Group
Streptococcus Lutetiensis	Streptococcus Mitis	Streptococcus Oralis

Streptococcus Other Group	Streptococcus Parasinguinis	Streptococcus Peroris
Streptococcus Pseudoporcinus	Streptococcus Salivarius	Streptococcus Sanguis
Streptococcus Sobrinus	Streptococcus Sp	Streptococcus Sp.
Streptococcus Thermophilus	Streptococcus Vestibularis	Streptococcus Viridans

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