

Early antibiotic use and incidence of necrotising enterocolitis in very preterm infants: a UK based observational study using routinely recorded data**Inclusion criteria: Birth weight < 1500g or GA < 32 wk****Born between: 1/1/2012 and 31/12/2020**

Request data as one table with individual-level data with each row representing a unique baby. Each item/variable as separate column.

Exposure parameters:

| Requested item | Item name in extract | How is it derived | Coding in extract | Notes |
|-----------------|----------------------|---|----------------------------------|--|
| Antibiotics any | Antibiotics_Day1 | Postnatal Day 1 with any DailyDrugs in 1010155 Benzyl Penicillin 1010158 Augmentin 1010179 Flucloxacillin 500012 Flucloxacillin 500016 Gentamicin 500072 Co-amoxiclav 500086 Co-amoxiclav 500084 Ciprofloxacin 500029 Netilmicin 500002 Amikacin 500211 Tazocin 500023 Metronidazole 500040 Vancomycin 500007 Cefotaxime 500004 Ampicillin 500009 Cefuroxime 500008 Ceftazidime 500175 Ceftriaxone 500032 Piperacillin 500206 Ofloxacin 500005 Azlocillin 1010171 Linezolid 1010271 Cefalexin 1010139 Amoxicillin 500070 Amoxicillin 500128 Meropenem 500118 Imepenem 500145 Imipenem THEN (1) | 0 = No 1 = Yes 9 = Unknown | Indicates whether baby has received antibiotics on day 1 |
| | Antibiotics_Day6 | As above for each postnatal day between Day2-Day6 | 0 = No 1 = Yes | |

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| | | | 9 = Unknown | |
| Antibiotics standard empiric | | As above, but only ampicillin or penicillin + gentamicin | | |
| | Day of first antibiotics | Postnatal day of first (of any) antibiotic treatment | Numeric (age in days since birth if received antibiotics) 999 = No antibiotics received throughout admission | |
| | Total antibiotics | Total number of days on (any) antibiotics throughout admission | Numeric 999 = No antibiotics received throughout admission | |

Outcome parameters

| Requested item | Item name in extract | How is it derived | Coding in extract | Notes |
|--|------------------------------|--|--|--|
| Length of stay | | Defined as the total number of days a baby received neonatal care (any level of care) from Daily Care General Information - LOCATIONS OF HIGHEST LEVEL OF CARE | Numeric (age in days at discharge) | |
| Survival | PostnatalDayofDeath | Where the following is true: DayDateAnon where DischargeDestination = 3 | Numeric (age in days since birth if baby died) 999 = Survived | |
| | Death before day of interest | According to above - Before day 3 (exclusion) - Before day 7 (for competing risk analysis) - Before day 14 (for competing risk analysis) - Before day 28 | 0 = Yes 1 = No 9 = Unknown | |
| | SurvivaltoDischarge | Where the following is true: DischargeDestination = 3 THEN (0) | 0 = Died 1 = Survived to discharge 9 = Unknown | Survival to discharge from neonatal care for the final episode |
| | FinalDischDestination | N/A | Text | Discharge destination for the final episode |
| Cause of death | Causeofdeath | ICD-10 | | |
| Necrotising enterocolitis (possible more than one episode) | NEC_NNAP | Where the following is true: NECTreatment > 0 AND XRayAppearances in | 0 = No NEC 1 = NEC present 9 = Unknown | NNAP definition |

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| | | <p>Pneumatosis Pneumoperitoneum AND</p> <p>ClinicalFindings in Increased/bilious aspirate Abdominal distension Bloody stools THEN (1)</p> | | |
| | Severe_NEC_Battersby | <p>Where the following is true: CauseOfDeath = 17 OR PortMortemConfirmation = 1 OR GastrointestinalDiagnoses OR PrincipleProceduresDuringStay OR PrincipalDiagnosisAtDischarge in Laparotomy Laparotomy approach NEC Colectomy and ileostomy NEC AND GastrointestinalDiagnosis or PrincipalDiagnosisAtDischarge in Necrotising enterocolitis Necrotising enterocolitis – confirmed Necrotising enterocolitis – perforated Necrotising enterocolitis – proven (on xray or surgery)</p> <p>OR GastrointestinalDiagnoses OR PrincipalDiagnosisAtDischarge in Necrotising enterocolitis Necrotising enterocolitis – confirmed Necrotising enterocolitis – perforated Necrotising enterocolitis – proven (on xray or surgery)</p> <p>AND DischargeDestination = 3 OR GastrointestinalDiagnoses or PrincipalDiagnosisAtDischarge = Necrotising enterocolitis – perforated OR NECTreatment >= 1 AND GastrointestinalDiagnoses OR PrincipalDiagnosisAtDischarge in Necrotising enterocolitis Necrotising enterocolitis – confirmed Necrotising enterocolitis – perforated Necrotising enterocolitis – proven (on xray or surgery)</p> | <p>0 = No severe NEC 1 = Severe NEC present 9 = Unknown</p> | Battersby Severe NEC definition |

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| | | OR LaparotomyPerformed = Yes AND HistologyConfirmationNEC = Yes OR VisualInspectionConfirmationNEC = Yes THEN (1) | | |
| | NEC_Any (pragmatic) | Where the following is true: (TreatmentNEC >= 1 OR Code in 1010683 Necrotising enterocolitis – suspected 10708 Necrotising enterocolitis – Perforated 15809 Necrotizing enterocolitis 15809 Necrotising enterocolitis - Confirmed) AND (5 or more days of nil by mouth where DayEnteralFeeds = 0 OR DayFormulaType = No entry OR VolumeMilk = 0/No entry AND 5 consecutive days of antibiotics over the same five days of receiving nil by mouth where DailyDrugs in 1010155 Benzyl Penicillin 1010158 Augmentin 1010179 Flucloxacillin 500012 Flucloxacillin 500016 Gentamicin 500072 Co-amoxiclav 500086 Co-amoxiclav 500084 Ciprofloxacin 500029 Netilmicin 500002 Amikacin 500211 Tazocin 500023 Metronidazole 500040 Vancomycin 500007 Cefotaxime 500004 Ampicillin 500009 Cefuroxime 500008 Ceftazidime 500175 Ceftriaxone 500032 Piperacillin | 0 = No NEC present 1 = NEC present 9 = Unknown | Webbe NEC definition for any NEC treatment |

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| | | 500206 Ofloxacillin 500005 Azlocillin 1010171 Linezolid 1010271 Cefalexin 1010139 Amoxicillin 500070 Amoxicillin 500128 Meropenem 500118 Imepenem 500145 Imipenem OR Died within 5 days of ' TreatmentNEC >= 1') | | |
| | NEC onset day | Postnatal age for NEC onset TreatmentNEC >= 1 OR First day where diagnosis 1010683 Necrotising enterocolitis – suspected 10708 Necrotising enterocolitis – Perforated 15809 Necrotizing enterocolitis 15809 Necrotising enterocolitis – Confirmed is recorded | | |
| | NEC onset PMA | Postmenstrual age for NEC onset | | |
| NEC related variables (raw data) | PostmortemConfirmation | If a necrotising enterocolitis diagnosis was made at any point at admission, specify if the post mortem confirmed it. | N No Y Yes 9 Unknown | |
| | SurgicalProcedure | Surgical procedure on the date and time specified OPCS coded and/or SNOMED CT | | |
| | StomachInSitu | N No Y Yes | | |
| | InvestigateAbdsigns | N No Y Yes | | |
| | XrayAppearance | ?? 1 Pneumatosis 2 Air in the liver 3 Pneumoperitoneum 4 Fixed loop 5 Gasless 9 None of the above | | |
| | abdominalxrayfindings | 01 Abdominal distension 02 Abdominal tenderness 03 Increased/ bilious aspirates 04 Abdominal discolouration 05 Abdominal mass 06 Bloody stools | | |

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| | | 07 Mucousy stools 09 None of the above | | |
| | TransferredOutManagementNEC | N No Y Yes | | |
| | necLaparotomy | 0 Laparotomy not required 1 Laparotomy required but PATIENT too ill to carry it out 2 Laparotomy required and carried out | | |
| | laparotomyConfirm | N No Y Yes | | |
| | necHistologyConfirmed | 0 Not confirmed 1 Yes confirmed 9 No histological inspection/Not applicable | | |
| Infant: Sepsis suspected on first day | SuspectedSepsisFirstDays | Where the following is true: DayDateAnon in first day of life AND first full day in unit AND SuspectedSepsis >= 1 (Y) | 0 = No 1 = Yes 9 = Unknown | |
| Early onset blood stream infection | | Defined from Infection Cultures (Episodic) recorded in the first 3 days/before day 3 • Pure growth of pathogen from blood OR • Pure growth of pathogen from CSF OR • Either a pure growth of a skin commensal or a mixed growth with ≥3 clinical signs at the time of blood sampling | | |
| Late onset blood stream infection NNAP definition | | Defined from Infection Cultures (Episodic) recorded after day 3 • Pure growth of pathogen from blood OR • Pure growth of pathogen from CSF OR • Either a pure growth of a skin commensal or a mixed growth with ≥3 clinical signs at the time of blood sampling | Dichotomous (No infection=0, Infection=1) Dichotomous Unknown = 9 | |
| Late onset infection, non-NNAP | | 5 consecutive days of antibiotic treatment defined as 5 consecutive days of any of the following (including in combination and changing during the 5 days) after day 3 Daily care medication •1010155 Benzyl Penicillin •1010158 Augmentin •1010179 Flucloxacillin •500012 Flucloxacillin •500016 Gentamicin •500072 Co-amoxiclav •500086 Co-amoxiclav •500084 Ciprofloxacin | Dichotomous (No infection=0, Infection=1) Dichotomous | |

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| | | <ul style="list-style-type: none"> •500029 Netilmicin •500002 Amikacin •500211 Tazocin •500023 Metronidazole •500040 Vancomycin •500007 Cefotaxime •500004 Ampicillin •500009 Cefuroxime •500008 Ceftazidime •500175 Ceftriaxone •500032 Piperacillin •500206 Ofloxacin •500005 Azlocillin •1010171 Linezolid •1010271 Cefalexin •1010139 Amoxicillin •500070 Amoxicillin •500128 Meropenem •500118 Imepenem •500145 Imipenem •500069 Ambisome (Liposomal Amphotericin) •500003 Amphotericin •1010195 Amphotericin Liposoma | | |
| Early onset infection (pragmatic) | | >5 consecutive days of antibiotic treatment defined as 6 consecutive days of any of the following (including in combination and changing during the 6 days) before day 3 Daily care medication | | |
| Time to reach full feeding | | First day of 3 consecutive days where parenteral nutrition or intravenous fluid are not recorded | | |

Covariates/confounders

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| BadgerID | AnonPatientID | | N/A | Episode-specific identifier for each baby |
| Gestational age at birth | GestationWeeks | | Numeric (10 - 49) | |
| | GestationDays | | Numeric (0-6) 9 = Unknown | |
| | GA total days | Weeks x 7 + days | | |

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| Birth weight | Birthweight | | Numeric (g) 99999 = Unknown | Accepted range: 001 – 9998g |
| Birth head circumference | BirthHeadCircumference | Can perhaps be useful to differentiate between symetrical and asymetrical IUGR | | |
| Sex | Gender | | 0 = Unknown 1 = Male 2 = Female 9 = Not specified | |
| Birth weight z-score | | Specify Marsal or Fenton or WHO | Numeric 99999 = Unknown | |
| Ethnicity | Race | Combine parental ethnicities (see row 36,39) Parents Demographics ETHNIC CATEGORY (MOTHER) (categorical) Coded as: WHITE (A - British, B - Irish, C - Any other white background); MIXED (D - White and Black Caribbean, E - White and Black African, F - White and Asian, G - Any other mixed background); ASIAN OR ASIAN BRITISH (H - Indian, J - Pakistani, K - Bangladeshi, L - Any other Asian Background); BLACK OR BLACK BRITISH (M - Caribbean, N - African, P - Any other Black background); OTHER ETHNIC GROUPS (R - Chinese, S - Any other ethnic group); UNKNOWN (Z, DTA - Not stated, 99 - Not known) This data item is based on self-reported ethnicity as recorded in maternity notes | ?e.g. Categorised into four groups (White=1; Asian & Mixed=2; Black & Mixed=3; Other and not given=4) | |
| Smoking during pregnancy | Smoking | Pregnancy Details MOTHER CURRENT SMOKER AT BOOKING INDICATOR (categorical, codes 1-6) | 0 = No 1 = Yes 9 = Unknown | |
| Multiplicity | FetusNumber | N/A | Numeric 99 = Unknown | |
| Birth year | BirthYear | N/A | Numeric 9999 = Unknown | |
| Birth year (mother) | BirthYearMother | N/A | Numeric 9999 = Unknown | |
| Parity of mother | Primiparity | Pregnancy Details PREGNANCY TOTAL PREVIOUS PREGNANCIES Dichotomous: code 00=Y; code 01- 29=N | Primiparous: Dichotomous (Not first pregnancy=0; First pregnancy=1) | |
| Maternal deprivation score | PostCodeMother | LSOA centiles | | |
| | MumEducation | | | |
| | MumOccupation | | | |
| Maternal Diabetes (Y/N) | MaternalDiabetes | Where the following is true: ProblemsMedicalMother = 15 THEN (1) ProblemsMedicalMother = 00 THEN (0) | 0 = No maternal diabetes 1 = Maternal Diabetes Present 99 = Unknown | Blank entries coded in as 99 |

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| Maternal gestational diabetes (Y/N) | MaternalGestDiabetes | Where the following is true: ProblemsDuringPregnancy = 33 THEN (1) ProblemsDuringPregnancy = 00 THEN (0) | 0 = No gestational diabetes 1 = Gestational diabetes present 99 = Unknown | Blank entries coded in as 99 |
| Maternal pre-eclampsia requiring pre-term birth (Y/N) Maternal pre-eclampsia | PreEclampsia | Where the following is true: ProblemsDuringPregnancy = 31 THEN (1) | 0 = No pre-eclampsia 1 = Pre-eclampsia present 99 = Unknown | Blank entries coded in as 99 |
| Maternal gestational hypertension (Y/N) | MaternalGestHypTension | Where the following is true: ProblemsDuringPregnancy = 30 THEN (1) | 0 = No gestational hypertension 1 = Gestational hypertension present 99 = Unknown | Blank entries coded in as 99 |
| Maternal prolonged rupture of membranes | ROMTimeAnon | Derived (Minutes) | Numeric | Number of minutes from birth to event |
| | Prolonged_ROM | Where the following is true: ProblemsDuringPregnancy = 20 THEN (1) | 0 = No prolonged rupture 1 = Prolonged rupture present | |
| Maternal suspected chorioamnionitis (Y/N) | Chorioamnionitis | Where the following is true: MaternalPyrexialInLabour38c = 1 OR IntrapartumAntibioticsGiven = 1 THEN (1) | 0 = No 1 = Yes 9 = Unknown | Blank entries coded in as 9 |
| Intrapartum Antibiotics | IntrapartumAntibioticsGiven | IntrapartumAntibioticsGiven = 1 THEN (1) | 0 = No 1 = Yes 9 = Unknown | |
| Maternal pyrexia | MaternalPyrexialInLabour | MaternalPyrexialInLabour38c = 1 THEN (1) | 0 = No 1 = Yes 9 = Unknown | |
| Maternal GBS | MaternalGBS | ProblemsInfctPregnancyMother = Group B streptococcus THEN (1) | 0 = No 1 = Yes 9 = Unknown | |
| Maternal receipt of antenatal steroids (Y/N) | MaternalAntenatalSteroids | Where the following is true: SteroidsAntenatalGiven = 1 AND SteroidsAntenatalCourses = 1 THEN (1) SteroidsAntenatalGiven = 1 AND SteroidsAntenatalCourses = 2 THEN (2) SteroidsAntenatalGiven = 0 AND SteroidsAntenatalCourses = 0 THEN (0) | 0 = None given 1 = Complete 2 = Incomplete 9 = Unknown | |
| Maternal receipt of antenatal magnesium sulphate (Y/N) | MagnesiumSulphate | N/A | 0 = No 1 = Yes 9 = Unknown | |

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| Delivery mode | ModeOfDelivery | Emergency caesarean = 1 Elective caesarean = 2 Vaginal spontaneous = 3 | 1 = emergency 2 = elective 3 = vaginal 9 = unknown | |
| Induced delivery | Onsetoflabour | Spontaneous = 1 Induced (medical and/or surgical) = 2 None (i.e. caesarean) = 3 | 1 = spontaneous 2 = Induced 3 = None 9 = unknown | |
| Labour before caesarean | ModeofDelivery Caesarean | Yes No | 0 = no labour 1 = labour | |
| Delivery categories | Delivery categories | Categorize above: Vaginal AND Spontaneous = 1 Vaginal AND Induced = 2 Emergency caesarean AND labour = 3 Emergency caesarean AND no labour = 4 Elective caesarean AND labour = 5 Elective caesarean AND no labour = 6 | 1 = VagSpon 2 = VagInduc 3 = EmergCaesLab 4 = EmergCaesNolab 5 = ElectCaesLab 6 = ElectCaesNolab 9 = unknown | |
| Infant Apgar score at 1 minutes | apgar_1min | N/A | 0-10 Apgar score 99 = Unknown | |
| Infant Apgar score at 5 minutes | apgar_5min | N/A | 0-10 Apgar score 99 = Unknown | |
| Infant Apgar score at 10 minutes | apgar_10min | N/A | 0-10 Apgar score 99 = Unknown | |
| Spontaneous respiration time of onset | SpontaneousRespirationTime | 1 <1 mins 2 1-1.5 mins 3 1.6-2 mins 4 2.1-3 mins 5 3.1-4 mins 6 4.1-5 mins 7 > 5mins | | |
| Infant: chest compressions administered (Y/N) | CardiacMassage | Where the following is true: MethodsOfResuscitation = 16 THEN (1) | 0 = No cardiac massage 1 = Cardiac massage 99 = Unknown | |
| Infant: Intubation at delivery (Y/N) | IntubationDelivery | Where the following is true: MethodsOfResuscitation = 15 THEN (1) | 0 = No intubation 1 = Intubation 99 = Unknown | |
| Infant: Ventilation at delivery (Y/N) | VentilationDelivery | Where the following is true: MethodsOfResuscitation = 14 THEN (1) | 0 = No IPPV 1 = IPPV 99 = Unknown | |
| Infant: Emergency resuscitation drugs administered (Y/N) | ResusDrugsAdmin | Where the following is true: MethodsOfResuscitation = 17 OR MethodsOfResuscitation = 88 THEN (1) | 0 = No resuscitation drugs administered | |

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| | | | 1 = Resuscitation drugs administered 99 = Unknown | |
| Infant: Surfactant administered (Y/N) | SurfactantGivenResuscitation | N/A | 0 = No 1 = Yes 9 = Unknown | |
| Infant: Umbilical cord pH | CordPhArterial | N/A | 6.00-8.00 9.99 = Unknown | |
| | CordVenousPH | N/A | 6.00-8.00 9.99 = Unknown | |
| Umbilical cord lactate | CordLactate | | | |
| Umbilical cord base excess | CordBE | Labour and Delivery Details UMBILICAL CORD BLOOD BASE EXCESS CONCENTRATION (ARTERIAL) Continuous OR if not available use Labour and Delivery Details UMBILICAL CORD BLOOD BASE EXCESS CONCENTRATION (VENOUS) | CordBaseExcess: Continuous (to 1 decimal place) CordBaseExcessMs: Binary missing indicator created (Not missing=0; Missing=1) | |
| Base excess 12h worst | WorstBaseWithin12 | | | |
| Blood transfusion day 1-2 | BloodProductsTrans | On day 1 and day 2 Daily care blood transfusion BLOOD TRANSFUSION PRODUCT TYPE | 1 = yes 0 = no | |
| Umbilical catheters | LinesIn | Only on day 1-2 (admission) 1 Peripheral arterial line 2 Umbilical arterial line if THEN YES 3 Umbilical venous line if THEN YES 4 Percutaneous central venous line (long line) 5 Surgically inserted central venous line 6 Peripheral venous line 9 Not Applicable/ No Lines in Situ | 1 = yes 0 = no 9 = unknown | |
| Birth place | PlaceofBirthNHSCode | | Organization code | |
| Time to admission | | Admission Details CRITICAL CARE START YEAR AND MONTH and NUMBER OF MINUTES (BIRTH TO EVENT) | | |
| Assisted Ventilation | | On day 1-2 | | |
| Surfactant therapy | | On day 1-2 | | |
| Feeding advancement (early feeding) | | 198:9 E.g. any of the following items entered in the Daily Care Fluids and Feeding during the first 3 days • Any entry (1-6) under ENTERAL FEED TYPE GIVEN | Dichotomous (No enteral feeds=0; provided enteral feeds=1) | |

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| | | <ul style="list-style-type: none"> • OR any entry (0-88) under FORMULA MILK OR MILK FORTIFIER TYPE • OR any value >0 for TOTAL VOLUME OF MILK RECEIVED • OR any entry (1-8) under ENTERAL FEEDING METHOD <p>NO ENTERAL FEEDING GROUP DEFINED AS All other babies not fulfilling above criteria</p> | | |
| Feeding | | <p>On day 1-2</p> <ol style="list-style-type: none"> 1 Suckling at the breast 2 Mother's fresh expressed breast milk 3 Mother's frozen expressed breast milk 4 Donor expressed breast milk 5 Breast milk fortifier 6 Formula 9 Not applicable (Nil by mouth) | <p>1 = Formula 2 = Human milk 3 = Mix ? 0 = nil 9 = unknown</p> | |
| Probiotics | | On day 1-2 | <p>1 = yes 0 = no</p> | |
| Fluids and feeding: Parenteral nutrition today (partial or total) | ParenteralNutrition | PN on day1-2 | <p>1= yes 0 = no</p> | |
| Unit of first admission | ProviderNHSCode | N/A | <p>xxxxx - NHS organisational code ZZ210 - non-NHS England and Wales organisation (private/N.Ireland/Scotland) ZZ203 – Not known ZZ999 - Missing</p> | |
| Infant: Admission temperature | FirstAdmitTemperature | N/A | <p>24-45 77.7 = Not Recordable</p> | Measurement at first admission |
| Infant: Admission mean blood pressure | FirstAdmissionBP | N/A | <p>10-150 999 = Unknown</p> | Measurement at first admission |
| Infant: Admission blood glucose | FirstAdmissionBloodGlucose | N/A | <p>0.0-50.0 99.9 = Unknown</p> | Measurement at first admission |
| Infant: Admission heart rate | FirstAdmissionHR | N/A | <p>50-350 999 = Unknown</p> | Measurement at first admission |
| Infant: Admission oxygen saturation | FirstAdmissionOxygenSaturation | N/A | <p>10-100 999 = Unknown</p> | Measurement at first admission |

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| Infant: Surfactant administered on first day (Y/N) | SurfactantGivenFirstDays | Where the following is true: DayDateAnon in first day of life AND first full day in unit AND SurfactantGiven = 1 THEN (Y) | 0 = No 1 = Yes 9 = Unknown | |
| Infant: Mechanical ventilation on first day (Y/N) | RespiratorySupportFirstDays | Where the following is true: DayDateAnon in first day of life AND first full day in unit AND RespiratorySupport = 1 OR AddedO2 = 11 OR VentilationMode >= 1 THEN (1) | 0 = No mechanical ventilation on first day 1 = Mechanical ventilation on first day 9 = Unknown | Blank entries coded as 9 |
| Infant: Inotropes administered on first day (Y/N) | InotropesFirstDays | Where the following is true: DayDateAnon in first day of life AND first full day in unit AND DailyDrugs in 500098 Dopamine 500096 Dobutamine 500056 Adrenaline 500210 Noradrenaline 500116 Hydrocortisone 1010173 Milrinone OR InotropesGiven = 1 THEN (Y) | 0 = No 1 = Yes, Inotropes given today 9 = Unknown | Blank entries coded in as 9 |
| Hemodynamically significant PDA | PDA | Treated on day 1-2 Yes/No | | |
| | Cardiovascular: Treatment for patent ductus arteriosus (PDA) | 1 Indometacin/Indomethacin 2 Ibuprofen 3 Surgery 9 Not applicable | | |
| Neurology: Central tone | Centraltone | At admission (On day 1-2) 1 Normal 2 Increased 3 Decreased | 0 = normal 1 = abnormal incl floppy | |
| Admission: Time of cord clamping | CordClamp | Cord clamped immediately after birth | 0 = No 1 = Yes 9 = Unknown | |
| Infant: Transfer on first day (Y/N) | TransferOnFirstDay | Where the following is true: AdmitTimeAnon <= 1440 AND DischTimeAnon <= 1440 AND DischargeDestination does not equal 3 AND ProviderCode is different from POBCode AND EpisodeNumberBaby = 2 THEN (1) | 0 = No 1 = Yes 9 = Unknown | |

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| | | Same as: Admission Details SITE CODE (OF ADMITTING NEONATAL UNIT) or ORGANISATION CODE (OF ADMITTING NEONATAL UNIT) Different from Baby Demographics SITE CODE (OF ACTUAL PLACE OF DELIVERY) or ORGANISATION CODE (OF ACTUAL PLACE OF DELIVERY) And Baby Demographics EPISODE NUMBER | | |
| | TransferDestination | Derived from ProviderNHSCode | xxxx - NHS organisational code ZZ210 - non-NHS England and Wales organisation (private/N.Ireland/Scotland) ZZ203 – Not known ZZ999 - Missing | |
| Level of initial neonatal unit | POBLevel | Derived from POBNHSCode | 0 = Non-NNU 1 = SCU 2 = LNU 3 = NICU | |
| Neonatal network | POBNetwork | Derived from POBNHSCode | Text | |

Additional outcomes

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| Brain injury on imaging | BrainInjuryImaging | Where the following is true: LeftIVH OR RightIVH >= 3 OR PVL = Y THEN (1) | 0 = No brain injury on imaging 1 = Brain injury on imaging 9 = Unknown | Blank entries coded as 9 |
| Treated ROP | Treated_ROP | Where the following is true: ROPSurgery = 1 OR RightEyeSurgery = 1,2,3,4 OR LeftEyeSurgery = 1,2,3,4 | 0 = No treatment 1 = Treatment given | |
| Maximum stage of ROP | Max_ROP | N/A | 0 – No ROP 1 – Stage 1 ROP 2 - Stage 2 ROP 3 – Stage 3 ROP 4 – Stage 4 ROP 5 – Stage 5 ROP A – Aggressive posterior ROP | The maximum stage between right and left eye |

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| Bronchopulmonary dysplasia | BPD | Where the following is true: CGA = 36 calculated from GestationWeeks and GestationDays AND RespiratorySupport = 1 OR VentilationMode >= 1 OR Added02 > 0 THEN (1) | 0 = No respiratory support given at 36 weeks 1 = Respiratory support at 36 weeks 9 = Unknown | Blank entries coded as 9 |
| Need for surgical procedures (possible more than one) | SurgicalProcedures | Where the following is true: PrincipleProceduresDuringStay = 100033 Surgery for meconium ileus (von) 100076 Skin or soft tissue surgery requiring general or spinal anaesthesia (Description Required) 11222 Closure of small intestine/ileal perforation 11501 Laparoscopy 11904 Colostomy 11905 Ileostomy 1010826 Major surgery OR MajorSurgeryToday = Y THEN (1) | 0 = No 1 = Yes 9 = Unknown | Blank entries coded as 9 |
| Seizures | Seizures | Where the following is true: PrincipalDiagnosisAtDischarge = 10957 Seizures 15192 Seizure disorder 15194 Seizure disorder (cause unknown) 15195 Status epilepticus 15848 Seizures OR Convulsions = 1 THEN (1) | 0 = None 1 = Seizures at discharge 9 = Unknown | Blank entries coded as 9 |
| Weight at 36 weeks corrected gestational age (CGA) | CGA_weight | Where the following is true: DayWorkingWeight at 36 weeks (+/- 3 days) CGA | Numeric (g) 99999 = Unknown | Accepted range: 001 – 9998g |
| Exact CGA on day of measurement | CGA_exact | Calculated from DayDateAnon and GestationWeeks and GestationDays | Numeric | |
| Weight at discharge | DischWeightFinalEps | DayWorkingWeight on the last day of the last episode | Numeric (g) 99999 = Unknown | Accepted range: 001 – 9998g |
| Weight SDS at discharge | | Defined as the following data item on the final day of neonatal care: • Daily Care General Information PERSON WEIGHT IN GRAMS If final day is not entered, the penultimate day is used | Continuous | |
| Head circumference at discharge | DischHeadCircumFinalEps | DayHeadCirc on the last day of the last episode | Numeric (cm) 99.9 = Unknown | |
| CGA day of discharge | CGA_DischFinalEps | Calculated from DayDateAnon and GestationWeeks of the last episode | Numeric | |

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| Blindness | Vision_impairment | Where the following is true: Vision_visual_problems = 1 OR vision_defect_not_correctable = 1 OR Vision_blind = 1 THEN (1) | 0 = No 1 = Yes 9 = Unknown | |
| Deafness | auditory_hearing_impairment | N/A | 0 = No 1 = Yes 9 = Unknown | |
| Ability to walk | neuromotor_unable_walk_without_a | N/A | 0 = No 1 = Yes 9 = Unknown | |
| Exclusions for congenital gastrointestinal malformations | Exclusions_Malformations | Where the following is true: Diagnosis table code in eTable1 THEN (1) | 0 = No, none of the listed malformations present 1 = Yes | |
| Exclusions for life-limiting conditions or conditions requiring surgery | Exclusions_LifeLimitingOrSurgery | Where the following is true: Diagnosis table code in eTable2 THEN (1) | 0 = No, none of the conditions present 1 = Yes | |
| Clinical diagnoses at discharge | DiagnosesAtDischarge | ICD-10 and/or SNOMED CT Can be derived from daily records. [Secondary/exploratory outcomes] | For each selected outcome 0=No 1=Yes | |
| | | | | |