Neonatal Critical Care Minimum Data Set: Requirements Specification

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SCCI Standardisation Committee for Care Information

This information standard (SCCI0075) has been approved for publication by NHS England under section 250 of the Health and Social Care Act 2012.

Assurance that this information standard meets the requirements of the Act and is appropriate for the use specified in the specification document has been provided by the Standardisation Committee for Care Information (SCCI), a sub-group of the National Information Board.

This information standard comprises the following documents:

- Requirements Specification
- Change Specification
- Implementation Guidance.

An Information Standards Notice (SCCI0075 Amd 112/2015) has been issued as a notification of use and implementation timescales. Please read this alongside the documents for the standard.

The controlled copies of these documents can be found on the NHS Digital website. Any copies held outside of that area, in whatever format (e.g. paper, email attachment), are considered to have passed out of control and should be checked for currency and validity.

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Glossary of Terms

Abbreviation	What it stands for	Description
BAPM	British Association of Perinatal Medicine	The constitutional aim of the British Association of Perinatal Medicine is to improve the standard of perinatal care in the British Isles: http://www.bapm.org/.
CCAC	Critical Care Activity Code	Defined by the NHS Data Dictionary as an activity provided to a patient within a critical care period. CCACs are used extensively in the daily recording of healthcare activity delivered to patients receiving Neonatal or Paediatric Critical Care. A full list of current CCACs can be found at: http://www.datadictionary.nhs.uk/data_dictionary/attributes/c/cou/critical_care_activity_code_de.asp?shownav=1.
CDS	Commissioning Data Sets	The Commissioning Data Set is the basic structure used for the submission of commissioning data to the Secondary Uses Service and is designed to be capable of individually conveying many different Commissioning Data Set structures encompassing Accident and Emergency Attendances, Out-Patient Attendances, Future Attendances, Admitted Patient Care (APC) and Elective Admission List data.
DH	Department of Health	The Department of Health helps people to live better for longer. It leads, shapes and funds health and care in England, making sure people have the support, care and treatment they need, with the compassion, respect and dignity they deserve: https://www.gov.uk/government/organisations/department-of-health/about.
DSCN	Data Set Change Notice	A Data Set Change Notice was a mandate to NHS and partner organisations and system suppliers to ensure that they were able to support a new or changed data standard, issued by ISB. DSCNs have been replaced with Information Standards Notices (ISNs).
HRG	Healthcare Resource Group	Healthcare Resource Groups are standard groupings of clinically similar treatments which use common levels of healthcare resource. They are currently used as a means of determining fair and equitable reimbursement for care services delivered by Healthcare Providers. Their use as consistent 'units of currency' supports standardised healthcare costing and commissioning across the NHS.
HSCIC	The Health and Social Care Information Centre	The Health and Social Care Information Centre is a non-departmental public body of the Department of Health. Note that from 1 August 2016, the HSCIC adopted NHS Digital as its operating name: www.digital.nhs.uk
ISB	Information Standards Board	The Information Standards Board for Health and Social Care was responsible for making recommendations about the approval of new and revised information standards. This Board closed on 31st March 2014, and responsibility for the assurance of information standards and data collections transferred to the Standardisation Committee for Care Information (SCCI).
ISN	Information Standards Notice	Information Standards Notices (ISNs) are published by the Standardisation Committee for Care Information to announce new or revised information standards published under the Health and Social Care Act 2012.

Abbreviation	What it stands for	Description
NCCMDS	Neonatal Critical Care Minimum Data Set	The Neonatal Critical Care Minimum Data Set provides details of Neonatal Critical Care activities delivered to patients in England. It is collected on a daily basis for all patients in receipt of Neonatal Critical Care. For an overview of the current data set see: http://www.datadictionary.nhs.uk/data_dictionary/messages/supporting_data_sets/data_sets/neonatal_critical_care_minimum_data_set_fr.asp?shownav=1.
NCO	National Casemix Office	The National Casemix Office develops clinical grouping methodologies (including Healthcare Resource Groups) and software products to support the NHS: http://www.digital.nhs.uk/casemix.
NHS	National Health Service	Each of the four countries of the United Kingdom has a publicly funded health care system referred to as the National Health Service (NHS). The terms "National Health Service" or "NHS" are also used to refer to the four systems collectively.
NTPS	National Tariff Payment System	A set of prices and rules to help local NHS providers and commissioners provide best value to their patients produced by NHS Improvement and NHS England. This national reimbursement policy was formerly known as Payment by Results (or PbR).
PCCMDS	Paediatric Critical Care Minimum Data Set	The Paediatric Critical Care Minimum Data Set provides details of Paediatric Critical Care activities delivered to patients in England. It is collected on a daily basis for all patients in receipt of Paediatric Critical Care. For an overview of the current data set see: http://www.datadictionary.nhs.uk/data_dictionary/messages/supporting_data_sets/data_sets/paediatric_critical_care_minimum_data_set_fr.asp?shownav=1.
SCCI	Standardisation Committee for Care Information	The SCCI is a sub-group of the National Information Board (NIB). Empowered by the Health and Social Care Act 2012, the SCCI has responsibility for the assurance of information standards for use in the health and social care system in England. The SCCI membership is drawn from a range of organisations operating within health and social care: www.digital.nhs.uk/isce.
SNOMED CT	Systematized Nomenclature of Medicine Clinical Terms	SNOMED CT is the international information standard for clinical terminology across health and care: http://www.digital.nhs.uk/isce/publication/scci0034
SUS	Secondary Uses Service	The Secondary Uses Service is designed to provide anonymous patient-based data for purposes other than direct clinical care such as healthcare planning, commissioning, public health, clinical audit and governance, benchmarking, performance improvement, medical research and national policy development.
XML	Extensible Markup Language	Extensible Markup Language is a markup language that defines a set of rules for encoding documents in a format that is both human-readable and machine-readable.

Related Documents

Reference	Document Title	Document Filename
1	Neonatal Critical Care Minimum Data Set: Change Specification	SCCI0075 – NCCMDS – Change Specification

2	Neonatal Critical Care Minimum Data Set: Implementation Guidance	SCCI0075 – NCCMDS – Implementation Guidance
3	Standards for Hospitals Providing Neonatal Intensive and High Dependency Care (Second Edition)	http://www.bapm.org/publications/documents/guidelines/hosp_standards.pdf
4	British Association of Perinatal Medicine Categories of Care 2011	http://www.bapm.org/publications/documents/guidelines/CatsofcarereportAug11.pdf
5	Five Year Forward View	https://www.england.nhs.uk/wp-content/uploads/2014/10/5yfv-web.pdf
6	High Dependency Care for Children - Time To Move On	http://www.rcpch.ac.uk/sites/default/files/page/HDC%20for%20web.pdf
7	Improving Value for Patients from Specialised Care Commissioning Intentions 2016/2017 for Prescribed Specialised Services, NHS England	https://www.england.nhs.uk/commissioning/wp-content/uploads/sites/12/2015/09/comms-intents-16-17.pdf

Contents

1 Background

1.1 Scope and Purpose

The Neonatal Critical Care Minimum Data Set (NCCMDS) provides a record of what happens to a patient when they receive neonatal critical care in a Neonatal Intensive Care Unit (NICU), Maternity Ward, or Neonatal Transitional Care Ward. It was first introduced by Data Set Change Notice (DSCN) 14/2006, and is the responsibility of NHS Digital.

The primary purpose of the NCCMDS is to allow the operation of the National Tariff Payment System (NTPS) within neonatal critical care. NCCMDS supports the NTPS by capturing the data needed to generate a Healthcare Resource Group (HRG) for each calendar day (or part thereof) of a period of neonatal critical care.

The NCCMDS Standard requires all providers of NHS neonatal critical care to collect and flow the specified data. The NCCMDS is a requirement for all NHS Trusts and NHS Foundation Trusts that provide neonatal critical care in England. This includes all Trusts that have a Neonatal Intensive Care Unit and those that have Maternity or Neonatal Transitional Care Wards that deliver the critical care interventions (identified by Critical Care Activity Codes; CCACs) specified in the Data Set Specification provided in Appendix 1.

The standards and definitions of care used in the data set are based on the British Association of Perinatal Medicine (BAPM) Categories of Care 2011 which have been in use for a number of years by the service and are used in other similar data sets, such as the Neonatal Data Set. The data items within the NCCMDS can be derived from data that are recorded and used as part of the clinical management of a patient.

There are two versions of the NCCMDS:

- Version 1.0 (2007 Release), which is de facto the Standard first mandated by DSCN 14/2006 and includes 26 CCACs
- Version 2.0 (2016 Release), which is based on Version 1.0, but includes 14 additional (making a total of 40) CCACs.

Version 2.0 of the NCCMDS is collected by NHS providers of care in England and Version 1.0 is sent directly from them to the Secondary Uses Service (SUS) at NHS Digital, as a part of the Commissioning Data Set messages, as per Information Standards Board (ISB) 0092. SUS is the single, comprehensive repository for healthcare data in England, and is the mechanism by which the NTPS is implemented in England.

The HRGs generated from Version 2.0 of the NCCMDS are collected via the Department of Health's (DH) annual, mandated Reference Costs return, which provides details of the average cost of healthcare for all NHS providers of care, for a specific financial year. Information about Reference Costs can be found at: https://www.gov.uk/government/collections/nhs-reference-costs.

The HRGs generated from Version 1.0 of the NCCMDS are a mandated currency in the NTPS.

The HRGs are also used to:

- Commission packages of healthcare from providers
- Monitor the relative costs of critical care services (via submission as part of the Department of Health's annual, mandated, Reference Costs collection)
- Plan and monitor workload within and across providers and networks
- Assess and benchmark intra- and inter-hospital performance
- Support local and network clinical workload planning, monitoring and capacity.

The NCCMDS was developed in conjunction with:

- The Neonatal Critical Care Expert Working Group of the National Casemix Office
- The Neonatal Critical Care Clinical Reference Group of NHS England
- The Pricing Team at NHS England
- The Specialised Services Commissioning Team at NHS England
- The British Association of Perinatal Medicine (BAPM).

1.2 Impacted Users

Users who need to act to conform to the Standard are:

1. Those with responsibility for data capture solutions and IT solutions.

   These individuals are required to work with system suppliers to ensure that the data required for Version 2.0 of the NCCMDS can be captured and stored locally, and that Version 1.0 (2007 Release) of the NCCMDS is available for its mandated collection as part of the CDS. The ability to produce Version 1.0 of the data set from Version 2.0 must be tested and proven before any actual recording of Version 2.0 data.

2. Those with responsibility for the day-to-day data capture required to deliver the NCCMDS.

   This group will include clinical and administrative staff, who need to be aware of the data items for both Version 1.0 and Version 2.0 of the NCCMDS, and ensure that they are used appropriately, in accordance with the British Association of Perinatal Medicine Categories of Care 2011 standard.

3. Those with responsibility for onward transmission and other uses of the data.

   This will include those informatics and other staff with responsibility for transmission of the CDS data, those who have a role in producing Reference Costs data, and any other local users of the data. These individuals will need to be aware of the permitted uses of each version of the data set and ensure that any use or transmission of the data complies with appropriate fair processing arrangements that are consistent with national and local information governance criteria and guidelines.

1.3 Uses

Maintaining two versions of the NCCMDS allows data to be collected locally without affecting the data flows currently used to facilitate reimbursement at local levels. It is intended that the next time that there is a major update to the CDS, NHS Digital will submit a proposal to effect a change to the CDS such that Version 2.0 (2016 Release) of the NCCMDS flows to SUS in full and is used in the NTPS.

The version of the NCCMDS to be used for the following purposes is:

Purpose	Post-change	In future*
Local recording in systems; direct care	Version 2.0 (2016 Release)	Version 2.0 (2016 Release)
Local managerial and clinical audit	Version 2.0 (2016 Release)	Version 2.0 (2016 Release)
Submitted with the CDS for NTPS	Version 1.0 (2007 Release)	Version 2.0 (2016 Release)
Aggregate activity and costing data submitted with Reference Costs	Version 2.0 (2016 Release)	Version 2.0 (2016 Release)

*Subject to SCCI acceptance and successful implementation of changes to the CDS.

Version 1.0 (2007 Release) is effectively a subset of Version 2.0 (2016 Release). Information about how to produce Version 1.0 from Version 2.0 is provided in Appendix 2.

1.4 Implementation

Version 1.0 of the NCCMDS was implemented in April 2007. Providers may implement Version 2.0 (whilst maintaining the ability to produce Version 1.0) at any time from 7 September 2016. All providers must implement Version 2.0 (whilst maintaining the ability to produce Version 1.0) by 1 December 2016.

1.5 Related Standards

Standard No	Standard Title	Documentation
DSCN 14/2006	Neonatal Critical Care Minimum Data Set	http://webarchive.nationalarchives.gov.uk/+/http://www.isb.nhs.uk/documents/isb-0075/dscn-14-2006/info
DSCN 01/2007	Paediatric Critical Care Minimum Data Set	http://webarchive.nationalarchives.gov.uk/+/http://www.isb.nhs.uk/documents/dscn/dscn2007/01-2007v3.pdf
ISB 0092	Commissioning Data Sets (CDS)	http://www.digital.nhs.uk/isce/publication/isb0092

2 Requirements

2.1 Requirements for IT Systems

The Requirements for IT systems are:

	Requirements
1	IT systems and processes MUST be established or updated in order to facilitate local recording of NCCMDS Version 2.0 (2016 Release).
2	IT systems MUST be configured in such a way that NCCMDS data can be linked to the Commissioning Data Set messages within which Version 1.0 NCCMDS data are transmitted, as per the requirements of ISB 0092.
3	IT systems and processes MUST be established or updated in order to allow Version 2.0 (2016 Release) of the NCCMDS to be translated into Version 1.0 (2007 Release) of the NCCMDS.
4	The ability to produce Version 1.0 (2007 Release) from Version 2.0 (2016 Release) MUST be tested and proven prior to actual recording of Version 2.0 (2016 Release) data.

2.1.1 Conformance Criteria for IT Systems

	Conformance Criteria
1	It MUST be possible to enter all Version 1.0 and Version 2.0 data items into the local record OR it MUST be possible to derive all Version 1.0 and Version 2.0 data items from the local record. This MUST be achieved by 1 December 2016.
2	It MUST be possible to produce Version 1.0 (2007 Release) of the NCCMDS from the Version 2.0 (2016 Release) data recorded. The ability to achieve this MUST be tested and proven prior to recording of Version 2.0 data and MUST be implemented once Version 2.0 data recording commences, which is no later than 1 December 2016.
3	Version 1.0 (2007 Release) data MUST be able to pass through the SUS XML Schema without error. This has been a requirement since April 2007 and MUST continue after the introduction of Version 2.0.
4	It MUST be possible to link each NCCMDS record (each record representing a period of neonatal critical care) with the Commissioning Data Set Consultant Episode data for the patient receiving care. This has been a requirement since April 2007 and MUST continue after the introduction of Version 2.0.

2.2 Requirements for Healthcare Providers

The Requirements for Healthcare Providers are:

	Requirements
1	Data capture forms and processes (including training on data recording) MUST be created or updated in order to facilitate local recording of NCCMDS Version 2.0 (2016 Release).
2	Clinicians and other Healthcare professionals MUST inform senior management if their software application(s) has not been created or updated to include all critical care activity codes.
3	Data from NCCMDS Version 2.0 (2016 Release) MUST be used to inform the reporting of Reference Costs from 2016/17 onwards. Data from Version 2.0 MAY be used for local purposes including clinical audit. Data from Version 2.0 MUST NOT be shared with any other party or organisation unless appropriate fair processing arrangements that comply with national and local information governance policies are in place.
4	Data from NCCMDS Version 1.0 (2007 Release) MUST continue to be used as the basis of the data transmitted to SUS via the CDS. Data from Version 1.0 MAY continue to be shared with other parties under existing fair processing arrangements that comply with national and local information governance policies. Data from Version 1.0 MUST NOT be shared with any other party or organisation unless appropriate fair processing arrangements that comply with national and local information governance policies are in place.

2.2.1 Conformance Criteria for Healthcare Providers

	Conformance Criteria
1	It MUST be possible to capture the new data items on any data capture forms, no later than 1 December 2016.
2	Staff with responsibility for data capture MUST be aware of the introduction of both Version 1.0 and Version 2.0 data items and their definitions.
3	Reference Costs submissions from 2016/17 onwards MUST be based on Version 2.0 of the NCCMDS.
4	Version 1.0 of the NCCMDS MUST continue to flow to SUS as part of the CDS transmission.

3 Legal Authority

Version 1.0 of the NCCMDS is collected as part of the Commissioning Data Sets under ISB 0092 (CDS 6.2); this data flow is covered by the Commencement Order for the CDS.

Version 2.0 is collected for local clinical use, to be used in aggregate form to generate HRGs. Other local uses must have an appropriate legal basis and fair processing arrangements approved by the local Caldicott Guardian.

4 Benefits

The NCCMDS allows the operation of the NTPS in neonatal critical care. The NTPS "aims to support the NHS to restore financial balance, maintain quality and begin the wider service redesign needed to ensure future sustainability" (NHS England[1]). The need to develop new, more efficient service delivery models, which are in line with up-to-date best clinical practice, is a theme in The NHS Five Year Forward View plan and also features heavily in High Dependency Care for Children – Time to Move On published by the Royal College of Paediatrics and Child Health.

Maintaining two versions of the NCCMDS allows for the development, and testing, of HRGs which reflect current clinical practice and therefore allows trusts to be able to cost such clinical activity accurately, thereby enabling appropriate reimbursement for such activity by commissioners. Appropriate service funding in turn facilitates new and sustainable service models to be developed, allowing the patients and their families to receive the best care they can as close to their home as clinically feasible. It also supports national policies concentrating specialised care in fewer, larger, centres of excellence to ensure service quality, patient safety and best possible clinical outcomes.

Healthcare providers should benefit from being appropriately reimbursed for the care activity provided. This assurance should allow appropriate investment in training of staff in these care settings, and the structure and equipment of such care settings, improving the service delivered to the patient. The critical care activity codes should also enable a clear picture of types of care being delivered within a provider, thereby increasing the opportunity for models of best practice to be identified and adopted between providers.

NHS England's National Specialised Commissioners should benefit as they will have clarity and assurance that they are appropriately reimbursing care organisations for the care activity being delivered, and have a good understanding of the care they are actually commissioning in relation to the needs of their population. The availability of the NCCMDS data and the HRGs it generates provides potential for more efficient and appropriate service funding and may assist in preventing costly alternatives to plug perceived gaps in current service provision.

5 Maintenance Strategy

5.1 Change Process

The data set will be maintained by the National Casemix Office at NHS Digital to ensure it continues to be fit for purpose. Work will also be undertaken to implement SNOMED CT in the NCCMDS. Primarily, this will be achieved through engagement with the Casemix Expert Working Groups for neonatal and paediatric critical care. Transition to SNOMED CT is not currently in scope, as the IT supporting the flow of these data can accommodate two-digit activity codes only.

5.2 Contacts

Queries about the NCCMDS should be directed to the National Casemix Office via enquiries@nhsdigital.nhs.uk.

[1] https://www.england.nhs.uk/resources/pay-syst/tariff-consultation-notice/; retrieved 13 July 2016.

Appendix 1: Data Set Specification

Scope

The scope of the NCCMDS is:

a) All patients on a ward with a Critical Care Unit Function of National Code:

- 13 – Neonatal Intensive Care Unit (Neonatal critical care patients predominate).

b) All patients (excluding mothers) on a ward with a Critical Care Unit Function of National Code:

- 14 – Facility for Babies on a Neonatal Transitional Care Ward
- 15 – Facility for Babies on a Maternity Ward

to whom one or more of the following Critical Care Activity Codes applies for a period greater than four hours:

01 Respiratory support via a tracheal tube (Respiratory support via a tracheal tube provided)
02 Nasal Continuous Positive Airway Pressure (nCPAP) (Patient receiving nCPAP for any part of the day)
04 Exchange Transfusion (Patient received exchange transfusion)
05 Peritoneal Dialysis (Patient received Peritoneal Dialysis)
06 Continuous infusion of inotrope, pulmonary vasodilator or prostaglandin (Patient received a continuous infusion of an inotrope, vasodilator (includes pulmonary vasodilators) or prostaglandin)
07 Parenteral Nutrition (Patient receiving Parenteral Nutrition (amino acids +/- lipids))
08 Convulsions (Patient having convulsions requiring treatment)
09 Oxygen Therapy (Patient receiving additional oxygen)
10 Neonatal abstinence syndrome (Patient receiving drug treatment for neonatal abstinence (withdrawal) syndrome)
11 Care of an intra-arterial catheter or chest drain (Patient receiving care of an intra-arterial catheter or chest drain)
12 Dilution Exchange Transfusion (Patient received Dilution Exchange Transfusion)
13 Tracheostomy cared for by nursing staff (Patient receiving care of tracheostomy cared for by nursing staff not by an external Carer (e.g. parent))
14 Tracheostomy cared for by external Carer (Patient receiving care of tracheostomy cared for by an external Carer (e.g. parent) not by a NURSE)
15 Recurrent apnoea (Patient has recurrent apnoea needing frequent intervention, i.e. over 5 stimulations in 8 hours, or resuscitation with IPPV two or more times in 24 hours)
16 Haemofiltration (Patient received Haemofiltration)
22 Continuous monitoring (Patient requiring continuous monitoring (by mechanical monitoring equipment) of respiration or heart rate, or by transcutaneous transducers or by Saturation Monitors. Note: apnoea alarms and monitors are excluded as forms of continuous monitoring)
23 Intravenous glucose and electrolyte solutions (Patient being given intravenous glucose and electrolyte solutions)

24 Tube-fed (Patient being tube-fed)
25 Barrier nursed (Patient being barrier nursed)
26 Phototherapy (Patient receiving phototherapy)
27 Special monitoring (Patient receiving special monitoring of blood glucose or serum bilirubin measurement at a minimum frequency of more than one per calendar day)
28 Observations at regular intervals (Patient requiring recorded observations for temperature, heart rate, respiratory rate, blood pressure or scoring for neonatal abstinence syndrome. Recorded observations must be at a minimum frequency of 4 hourly)
29 Intravenous medication (Patient receiving intravenous medication)
80* Heated Humidified High Flow Therapy (HHHFT) (Patient receiving HHHFT)*
81* Presence of an umbilical venous line*
82* Continuous infusion of insulin (Patient receiving a continuous infusion of insulin)*
83* Therapeutic hypothermia (Patient receiving therapeutic hypothermia)*
84* Patient has a Replogle tube in situ*
85* Patient has an epidural catheter in situ*
86* Patient has an abdominal silo*
87* Administration of intravenous (IV) blood products*
88* Patient has a central venous or long line (Peripherally Inserted Central Catheter line) in situ*
89* Patient has an indwelling urinary or suprapubic catheter in situ*
90* Patient has a trans-anastomotic tube in situ following oesophageal atresia repair*
91* Patient has confirmed clinical seizure(s) today and/or continuous cerebral function monitoring (CFM)*
92* Patient has a ventricular tap via needle or reservoir today*
93* Patient has a stoma*

* Applicable to Version 2.0 (2016 Release) only.

Data Items

There are two parts to the NCCMDS:

a) Data which applies to the whole period of critical care.

b) Data related to each day of critical care.

The first set of data need only be recorded once and may be updated as the episode develops to discharge from critical care.

Daily data needs to be completed each day within the critical care period. A day is regarded as a calendar day midnight to midnight. Daily events should be recorded if they occur at any point in the 24 hour period. It is for units to decide when to collect the data, however, since periods are midnight to midnight, as close to midnight as feasible would be ideal. A single critical care period may contain up to 999 daily records; each daily record may contain up to 20 CCACs and up to 20 OCPS codes for High Cost Drugs.

A period of critical care is not the same as a consultant episode.

a) In a NICU environment the period of critical care will be from admission to discharge from the NICU.

b) On a Maternity ward or Neonatal Transitional Care ward, the critical care period runs from the first to the last day of a continuous period of neonatal critical care.

The definition of a critical care episode is available at: http://www.datadictionary.nhs.uk/data_dictionary/classes/c/critical_care_period_de.asp?shownav=1.

Episode Data Items

	Data Item	Description	Formats/Codes
0	***DATA FOR THE ENTIRE EPISODE***	These data items are part of the existing APC CDS. They are listed here as they are used in the HRG Grouping algorithm	
0.1	PERSON BIRTH DATE	The patient's date of birth	CCYY-MM-DD
0.2	DISCHARGE DATE (HOSPITAL PROVIDER SPELL)	The date the patient was discharged from the hospital provider spell	CCYY-MM-DD
0.3	DISCHARGE METHOD CODE (HOSPITAL PROVIDER SPELL)	The method of discharge from the hospital provider spell	1. Patient discharged on clinical advice or with clinical consent 2. Patient discharged him/herself or was discharged by a relative or advocate 3. Patient discharged by mental health review tribunal, Home Secretary or court 4. Patient died 5. Stillbirth
1	***STATIC DEMOGRAPHICS (PART OF NCCMDS)***		
1.1	CRITICAL CARE LOCAL IDENTIFIER	This is a unique local ACTIVITY IDENTIFIER used to identify the start of CARE ACTIVITY within a CRITICAL CARE PERIOD	Alpha Numeric, 8 Characters
1.2	CRITICAL CARE START DATE	Start date for this episode of critical care for the patient	CCYY-MM-DD
1.3	CRITICAL CARE START TIME	Start time for this episode of critical care for the patient	HH:MM:SS
1.4	CRITICAL CARE DISCHARGE DATE	The date on which a patient has completed an episode of critical care, and is discharged from critical care	CCYY-MM-DD
1.5	CRITICAL CARE DISCHARGE TIME	The time at which a patient has completed an episode of critical care, and is discharged from critical care	HH:MM:SS

	Data Item	Description	Formats/Codes
1.6	CRITICAL CARE UNIT FUNCTION	Type of care setting in which care is being delivered	**Adult Facilities** (Patients ≥ 19 years old on admission predominate) **01** = non-specific, general adult critical care patients predominate **02** = surgical adult patients (unspecified specialty) **03** = medical adult patients (unspecified specialty) **05** = neurosciences adult patients predominate **06** = cardiac surgical adult patients predominate **07** = thoracic surgical adult patients predominate **08** = burns and plastic surgery adult patients predominate **09** = spinal adult patients predominate **10** = renal adult patients predominate **11** = liver adult patients predominate **12** = obstetric and gynaecology critical care patients predominate **90** = non standard location using a ward area **Children and Young People Facilities** (Patients ≥ 29 Days to <19 years predominate) **04** = Paediatric Intensive Care Unit (Paediatric critical care patients predominate) **16** = Ward for children and young people **17** = High Dependency Unit for children and young people **18** = Renal Unit for children and young people **19** = Burns Unit for children and young people **92** = Non standard location using the operating department for children and young people **Neonatal Facilities** (Patients <29 days on admission predominate) **13** = Neonatal Intensive Care Unit (Neonatal critical care patients predominate) **14** = Facility for Babies on a Neonatal Transitional Care Ward **15** = Facility for Babies on a Maternity Ward **Other settings** **91** = non standard location using the operating department.

	Data Item	Description	Formats/Codes
1.7	GESTATION LENGTH (AT DELIVERY)	The number of weeks completed based upon an average 40 week gestation, which may be derived from: a) estimated date of delivery calculated by ultrasound scan measurements according to the trimester of the scan b) estimated date of delivery measured from the first day of the last menstrual period by LMP c) clinical assessment (in the absence of a or b) - antenatally for maternity, postnatally for Neonatal	Numeric, weeks

Notes:

a) PERSON BIRTH DATE. This data should already be part of the patient's Consultant Episode data. The date format is CCYY-MM-DD i.e. the 1st December 2006 would be 2006-12-01.
b) DISCHARGE DATE (HOSPITAL PROVIDER SPELL) and DISCHARGE METHOD CODE (HOSPITAL PROVIDER SPELL). These data should already be part of the patient's Consultant Episode data and are used within NCC HRGs to determine whether a patient dies within the critical care episode. These items are important as a higher level of care will be assigned on the day of death.
c) CRITICAL CARE LOCAL IDENTIFIER. This locally defined variable should as a minimum include a sequential numerical component that can discriminate two or more CRITICAL CARE PERIODS occurring on the same calendar day for the same patient.
d) CRITICAL CARE START DATE. The critical care episode should start on admission to NICU or on commencement of critical care on a maternity / neonatal transitional care ward.
e) CRITICAL CARE START TIME. This is the Start Time for critical care. Seconds are unimportant in this context.
f) CRITICAL CARE DISCHARGE DATE. The critical care episode should finish on discharge from NICU or on cessation of critical care on a maternity / neonatal transitional care ward.
g) CRITICAL CARE DISCHARGE TIME. This is the Discharge Time for critical care. Seconds are unimportant in this context.
h) CRITICAL CARE UNIT FUNCTION.
    a. Critical care delivered on a NICU should be coded as 13 = Neonatal Intensive Care Unit (Neonatal critical care patients predominate).
    b. Critical care delivered on a neonatal transitional care ward or a maternity ward should be coded as 14 or 15 respectively.
    c. Codes 01 to 12, 16 and 91 are settings in which either CCMDS (Adult CCMDS) or PCCMDS (Paediatric CCMDS) should be recorded rather than NCCMDS. In particular:
        i. 01 - 03, 05 - 12, 90 and 91 are settings in which CCMDS should be collected.
        ii. 04, 16 are settings in which PCCMDS should be collected.
i) Additional codes may be added to the NHS Data Dictionary as critical care services and units develop.
j) GESTATION LENGTH (AT DELIVERY). This is the baby's gestation length at birth in weeks. The hierarchy of assessment methods is provided by current NICE guidance. Gestation length is one of the key data items used in determining a patient's level of care.

Daily Data Items

	Data Item	Description	Formats/Codes
2	***DAILY ACTIVITY DATA***	Data may be recorded for each day of the NEONATAL CRITICAL CARE period. A maximum of 999 daily entries may be recorded in each period of critical care	
2.1	ACTIVITY DATE (CRITICAL CARE)	Date to which the daily activity data relates.	CCYY-MM-DD
2.2	PERSON WEIGHT	Last recorded weight of the patient in grams	Kilograms to 3 decimal places - n2.n3
2.3	CRITICAL CARE ACTIVITY CODE	As per the Critical Care Activity Code Table defined below. Activity codes indicate the care applied on the day. All codes relate to care provided on the ACTIVITY DATE (see Item 2.1)	Up to 20 instances of the codes for Neonatal Critical Care listed in the Critical Care Activity Code table
2.3.1 – 2.3.20	CRITICAL CARE ACTIVITY CODE (Instance 1 to 20)	See 2.3	See 2.3
2.4	HIGH COST DRUGS (OPCS)	Records use of high cost drugs as per OPCS definitions. All codes relate to drugs provided on the ACTIVITY DATE (see Item 2.1)	OPCS code in the range X81.n to X97.n OPCS codes are specified and maintained externally to NCCMDS
2.4.1 – 2.4.20	HIGH COST DRUGS (OPCS) (Instance 1 to 20)	See 2.4	See 2.4

Notes:

a) ACTIVITY DATE (CRITICAL CARE). This is the date to which the daily data applies. Up to 999 separate days of critical care may be recorded in each episode of critical care.

b) PERSON WEIGHT. This is the working weight for the patient on the ACTIVITY DATE (CRITICAL CARE). The working weight is one of the key factors used to determine the patient's level of care that day.

c) CRITICAL CARE ACTIVITY CODE. This field is repeated 20 times and is used to record key aspects of a patient's care for the day i.e. the ACTIVITY DATE (CRITICAL CARE). An activity should be recorded if it happened at any point on the ACTIVITY DATE (CRITICAL CARE). Up to 20 codes from the list 01 to 99 may be recorded each day. Critical Care Activity Codes are defined in the table below.

d) HIGH COST DRUGS (OPCS). This field is repeated 20 times and is used to record high cost drugs administered on the ACTIVITY DATE (CRITICAL CARE). Up to 20 codes from the OPCS High Cost Drugs List may be recorded each day. At this stage all High Cost Drugs should be reported in the APC data set also. OPCS High Cost Drugs[2] are maintained separately to NCCMDS.

[2] More information can be found on the NHS Digital website: http://systems.digital.nhs.uk/data/clinicalcoding/codingstandards/opcs4/chemoregimens

Critical Care Activity Codes (relevant to neonatal critical care)

Code Value	Description
01	Respiratory support via a tracheal tube (Respiratory support via a tracheal tube provided)
02	Nasal Continuous Positive Airway Pressure (nCPAP) (Patient receiving nCPAP for any part of the day)
03	Surgery (Patient received surgery)
04	Exchange Transfusion (Patient received exchange transfusion)
05	Peritoneal Dialysis (Patient received Peritoneal Dialysis)
06	Continuous infusion of inotrope, pulmonary vasodilator or prostaglandin (Patient received a continuous infusion of an inotrope, vasodilator (includes pulmonary vasodilators) or prostaglandin)
07	Parenteral Nutrition (Patient receiving Parenteral Nutrition (amino acids +/- lipids))
08	Convulsions (Patient having convulsions requiring treatment)
09	Oxygen Therapy (Patient receiving additional oxygen)
10	Neonatal abstinence syndrome (Patient receiving drug treatment for neonatal abstinence (withdrawal) syndrome)
11	Care of an intra-arterial catheter or chest drain (Patient receiving care of an intra-arterial catheter or chest drain)
12	Dilution Exchange Transfusion (Patient received Dilution Exchange Transfusion)
13	Tracheostomy cared for by nursing staff (Patient receiving care of tracheostomy cared for by nursing staff not by an external Carer (e.g. parent))
14	Tracheostomy cared for by external Carer (Patient receiving care of tracheostomy cared for by an external Carer (e.g. parent) not by a NURSE)
15	Recurrent apnoea (Patient has recurrent apnoea needing frequent intervention, i.e. over 5 stimulations in 8 hours, or resuscitation with IPPV two or more times in 24 hours)
16	Haemofiltration (Patient received Haemofiltration)
21	Carer Resident - Caring for Baby (External Carer (for example, parent) resident with the baby and reducing nursing required by caring for the baby)
22	Continuous monitoring (Patient requiring continuous monitoring (by mechanical monitoring equipment) of respiration or heart rate, or by transcutaneous transducers or by Saturation Monitors. Note: apnoea alarms and monitors are excluded as forms of continuous monitoring)
23	Intravenous glucose and electrolyte solutions (Patient being given intravenous glucose and electrolyte solutions)
24	Tube-fed (Patient being tube-fed)
25	Barrier nursed (Patient being barrier nursed)
26	Phototherapy (Patient receiving phototherapy)
27	Special monitoring (Patient receiving special monitoring of blood glucose or serum bilirubin measurement at a minimum frequency of more than one per calendar day)
28	Observations at regular intervals (Patient requiring recorded observations for temperature, heart rate, respiratory rate, blood pressure or scoring for neonatal abstinence syndrome. Recorded observations must be at a minimum frequency of 4 hourly)
29	Intravenous medication (Patient receiving intravenous medication)
80*	Heated Humidified High Flow Therapy (HHHFT) (Patient receiving HHHFT)*
81*	Presence of an umbilical venous line*
82*	Continuous infusion of insulin (Patient receiving a continuous infusion of insulin)*
83*	Therapeutic hypothermia (Patient receiving therapeutic hypothermia)*
84*	Patient has a replogle tube in situ*
85*	Patient has an epidural catheter in situ*
86*	Patient has an abdominal silo*
87*	Administration of intravenous (IV) blood products*
88*	Patient has a central venous or long line (Peripherally Inserted Central Catheter line) in situ*
89*	Patient has an indwelling urinary or suprapubic catheter in situ*
90*	Patient has a trans-anasomotic tube in situ following oesophageal atresia repair*
91*	Patient has confirmed clinical seizure(s) today and/or continuous cerebral function monitoring (CFM)*
92*	Patient has a ventricular tap via needle or reservoir today*
93*	Patient has a stoma*
99	No Defined Critical Care Activity (Patient is not receiving any of the critical care interventions listed above (excluding code 21). For example, patient is on the Intensive Care Unit ready for discharge and is receiving normal care. This is the default code.

* Applicable to Version 2.0 (2016 Release) only.

Appendix 2: Maintaining Data Flows in Conformance with Multiple Versions of the NCCMDS

In order to conform to both versions of the current Standard, and maintain the flow of CDS data, it will be necessary to remove the new codes from the data extract that is produced for SUS or any other external flow of data where Version 2.0 items are not covered by appropriate fair processing arrangements. This will mean:

1. Identifying and removing any instance of a new CCAC from the CCAC field for each day of the critical care period.
2. Checking whether (1) has led to the CCAC field being blank for any day of the critical care period.
3. Ensuring blank fields identified in (2) are populated with the default CCAC: 99 ‘No Defined Critical Care Activity’ (this is necessary as SUS will not accept a null field).
4. Checking whether (3) has led to any of the critical care periods with a Critical Care Unit Function Code of 13 being made up exclusively of days where the only recorded CCAC is 99.
5. Checking whether (3) has led to any of the critical care periods with a Critical Care Unit Function Code of either 14 or 15 being made up exclusively of days where the only recorded CCAC is 03, 21, or 99.
6. Removing any critical care periods identified in (4) or (5).