

# Paediatric Critical Care Minimum Data Set: Requirements Specification

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This information standard (SCCI0076) 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 (SCCI0076 Amd 113/2015) 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.

Date of publication: 07 September 2016

## Glossary of Terms

Abbreviation	What it stands for	Description
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 (April 2016) CCACs can be found at: <a href="http://www.datadictionary.nhs.uk/data_dictionary/attributes/c/cou/critical_care_activity_code_de.asp?shownav=1">http://www.datadictionary.nhs.uk/data_dictionary/attributes/c/cou/critical_care_activity_code_de.asp?shownav=1</a> . <a href="http://www.datadictionary.nhs.uk/data_dictionary/messages/supporting_data_sets/data_set_s/paediatric_critical_care_minimum_data_set_fr.asp?shownav=1">http://www.datadictionary.nhs.uk/data_dictionary/messages/supporting_data_sets/data_set_s/paediatric_critical_care_minimum_data_set_fr.asp?shownav=1</a> .
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: <a href="https://www.gov.uk/government/organisations/department-of-health/about">https://www.gov.uk/government/organisations/department-of-health/about</a> .
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: <a href="http://www.digital.nhs.uk">www.digital.nhs.uk</a>
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.

## Paediatric Critical Care Minimum Data Set: Requirements Specification

Abbreviation	What it stands for	Description
NCCMDS	Neonatal Critical Care Minimum Data Set	<p>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.</p> <p>For an overview of the current data set see:  <a href="http://www.datadictionary.nhs.uk/data_dictionary/messages/supporting_data_sets/data_sets/neonatal_critical_care_minimum_data_set_fr.asp?shownav=1">http://www.datadictionary.nhs.uk/data_dictionary/messages/supporting_data_sets/data_sets/neonatal_critical_care_minimum_data_set_fr.asp?shownav=1</a>.</p>
NCO	National Casemix Office	<p>The National Casemix Office develops clinical grouping methodologies (including Healthcare Resource Groups) and software products to support the NHS:  <a href="http://www.digital.nhs.uk/casemix">http://www.digital.nhs.uk/casemix</a>.</p>
NHS	National Health Service	<p>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.</p>
NTPS	National Tariff Payment System	<p>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).</p>
PCCMDS	Paediatric Critical Care Minimum Data Set	<p>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.</p> <p>For an overview of the current data set see:  <a href="http://www.datadictionary.nhs.uk/data_dictionary/messages/supporting_data_sets/data_sets/paediatric_critical_care_minimum_data_set_fr.asp?shownav=1">http://www.datadictionary.nhs.uk/data_dictionary/messages/supporting_data_sets/data_sets/paediatric_critical_care_minimum_data_set_fr.asp?shownav=1</a>.</p>
SCCI	Standardisation Committee for Care Information	<p>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: <a href="http://www.digital.nhs.uk/isce">www.digital.nhs.uk/isce</a>.</p>
SNOMED CT	Systematized Nomenclature of Medicine Clinical Terms	<p>SNOMED CT is the international information standard for clinical terminology across health and care:  <a href="http://www.digital.nhs.uk/isce/publication/scci0034">http://www.digital.nhs.uk/isce/publication/scci0034</a></p>
SUS	Secondary Uses Service	<p>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.</p>
XML	Extensible Markup Language	<p>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.</p>

## Related Documents

Reference	Document Title	Document Filename
1	Paediatric Critical Care Minimum Data Set: Change Specification	SCCI0076 – PCCMDS – Change Specification
2	Paediatric Critical Care Minimum Data Set: Implementation Guidance	SCCI0076 – PCCMDS – Implementation Guidance
3	PICANet National Report 2007	<a href="http://www.picanet.org.uk/Audit/Annual-Reporting/Annual-Report-Archive/PICANet_National_Report_2007.pdf">http://www.picanet.org.uk/Audit/Annual-Reporting/Annual-Report-Archive/PICANet_National_Report_2007.pdf</a>
4	Paediatric Critical Care Service Specifications: High Dependency Care, NHS England	<a href="https://www.england.nhs.uk/commissioning/wp-content/uploads/sites/12/2015/01/eo7-sb-paed-hig-dep-care.pdf">https://www.england.nhs.uk/commissioning/wp-content/uploads/sites/12/2015/01/eo7-sb-paed-hig-dep-care.pdf</a>
5	Paediatric Critical Care Service Specifications: Intensive Care, NHS England	<a href="https://www.england.nhs.uk/commissioning/wp-content/uploads/sites/12/2015/01/e07-sa-paed-inten-care.pdf">https://www.england.nhs.uk/commissioning/wp-content/uploads/sites/12/2015/01/e07-sa-paed-inten-care.pdf</a>
6	High Dependency Care for Children - Time To Move On	<a href="http://www.rcpch.ac.uk/sites/default/files/page/HDC%20for%20web.pdf">http://www.rcpch.ac.uk/sites/default/files/page/HDC%20for%20web.pdf</a>
7	Five Year Forward View	<a href="https://www.england.nhs.uk/wp-content/uploads/2014/10/5yfv-web.pdf">https://www.england.nhs.uk/wp-content/uploads/2014/10/5yfv-web.pdf</a>
8	Improving Value for Patients from Specialised Care: Commissioning Intentions 2016/2017 for Prescribed Specialised Services, NHS England	<a href="https://www.england.nhs.uk/commissioning/wp-content/uploads/sites/12/2015/09/comms-intents-16-17.pdf">https://www.england.nhs.uk/commissioning/wp-content/uploads/sites/12/2015/09/comms-intents-16-17.pdf</a>



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# 1 Background

## 1.1 Scope and Purpose

The Paediatric Critical Care Minimum Data Set (PCCMDS) provides a record of what happens to a patient when they receive paediatric critical care in a Paediatric Intensive Care Unit (PICU) or other critical care setting suitable for children. It was first introduced by Data Set Change Notice (DSCN) 01/2007, and is the responsibility of NHS Digital.

The primary purpose of the PCCMDS is to allow the operation of the National Tariff Payment System (NTPS) within paediatric critical care. PCCMDS 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 paediatric critical care.

The PCCMDS Standard requires all providers of NHS paediatric critical care to collect and flow the specified data. The PCCMDS is a requirement for all NHS Trusts and NHS Foundation Trusts that provide paediatric critical care in England. This includes all Trusts that have a Paediatric Intensive Care Unit and those with suitable 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 data items within the PCCMDS 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 PCCMDS:

- Version 1.0 (2007 Release), which is de facto the Standard first mandated by DSCN 01/2007 and includes 31 CCACs
- Version 2.0 (2016 Release), which is based on Version 1.0, but includes six additional (making a total of 37) CCACs.

Version 2.0 of the PCCMDS 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 PCCMDS 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 PCCMDS are a non-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 PCCMDS was developed in conjunction with:

- The Paediatric Critical Care Expert Working Group of the National Casemix Office
- The Paediatric Critical Care Clinical Reference Group of NHS England
- The Pricing Team at NHS England
- The Specialised Services Commissioning Team at NHS England
- The Paediatric Intensive Care Society
- The Paediatric Intensive Care Audit Network (PICANet).

## 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 PCCMDS can be captured and stored locally, and that Version 1.0 (2007 Release) of the PCCMDS 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 PCCMDS.

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 PCCMDS, and ensure that they are used appropriately.

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 PCCMDS allows data to be collected locally without affecting the data flows that may currently be 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 PCCMDS flows to SUS in full and is used in the NTPS.

The version of the PCCMDS 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 PCCMDS 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	<a href="http://webarchive.nationalarchives.gov.uk/+http://www.isb.nhs.uk/documents/isb-0075/dscn-14-2006/info">http://webarchive.nationalarchives.gov.uk/+http://www.isb.nhs.uk/documents/isb-0075/dscn-14-2006/info</a>
DSCN 01/2007	Paediatric Critical Care Minimum Data Set	<a href="http://webarchive.nationalarchives.gov.uk/+http://www.isb.nhs.uk/documents/dscn/dscn2007/01-2007v3.pdf">http://webarchive.nationalarchives.gov.uk/+http://www.isb.nhs.uk/documents/dscn/dscn2007/01-2007v3.pdf</a>
ISB 0092	Commissioning Data Sets (CDS)	<a href="http://www.digital.nhs.uk/isce/publication/isb0092">http://www.digital.nhs.uk/isce/publication/isb0092</a>

## 2 Requirements

### 2.1 Requirements for IT Systems

The Requirements for IT systems are:

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#### Requirements

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- 1 IT systems and processes **MUST** be established or updated in order to facilitate local recording of PCCMDS Version 2.0 (2016 Release).
  - 2 IT systems **MUST** be configured in such a way that PCCMDS data can be linked to the Commissioning Data Set messages within which Version 1.0 PCCMDS 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 PCCMDS to be translated into Version 1.0 (2007 Release) of the PCCMDS.
  - 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.
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#### 2.1.1 Conformance Criteria for IT Systems

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##### Conformance Criteria

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- 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 PCCMDS 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 PCCMDS record (each record representing a period of paediatric 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.
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## 2.2 Requirements for Healthcare Providers

The Requirements for Healthcare Providers are:

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### Requirements

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- 1 Data capture forms and processes (including training on data recording) **MUST** be created or updated in order to facilitate local recording of PCCMDS 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 PCCMDS 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 PCCMDS 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.
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### 2.2.1 Conformance Criteria for Healthcare Providers

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#### Conformance Criteria

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- 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 PCCMDS.
  - 4 Version 1.0 of the PCCMDS **MUST** continue to flow to SUS as part of the CDS transmission.
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## 3 Legal Authority

Version 1.0 of the PCCMDS 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 PCCMDS allows the operation of the NTPS in paediatric 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<sup>1</sup>). 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 PCCMDS 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 PCCMDS 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 PCCMDS. 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 PCCMDS should be directed to the National Casemix Office via [enquiries@nhsdigital.nhs.uk](mailto:enquiries@nhsdigital.nhs.uk).

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<sup>1</sup> <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 PCCMDS is:

- a) All patients on a ward with a Critical Care Unit Function of National Code:
  - 04 – Paediatric Intensive Care Unit (Paediatric critical care patients predominate).
- b) All patients on a ward with a Critical Care Unit Function of National Code:
  - 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

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

- 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)
- 09 Oxygen Therapy (Patient receiving additional oxygen)
- 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))
- 16 Haemofiltration (Patient received Haemofiltration)
- 50 Continuous electrocardiogram monitoring
- 51 Invasive ventilation via endotracheal tube
- 52 Invasive ventilation via tracheostomy tube
- 53 Non-invasive ventilatory support
- 55 Nasopharyngeal airway
- 56 Advanced ventilatory support (Jet or Oscillatory ventilation)
- 57 Upper airway obstruction requiring nebulised Epinephrine/ Adrenaline
- 58 Apnoea requiring intervention
- 59 Acute severe asthma requiring intravenous bronchodilator therapy or continuous nebuliser
- 60 Arterial line monitoring
- 61 Cardiac pacing via an external box (pacing wires or external pads or oesophageal pacing)
- 62 Central venous pressure monitoring
- 63 Bolus intravenous fluids (> 80 ml/kg/day) in addition to maintenance intravenous fluids
- 64 Cardio-pulmonary resuscitation (CPR)
- 65 Extracorporeal membrane oxygenation (ECMO) or Ventricular Assist Device (VAD) or aortic balloon pump
- 66 Haemodialysis (acute patients only i.e. excluding chronic)

- 67 Plasma filtration or Plasma exchange
  - 68 ICP-intracranial pressure monitoring
  - 69 Intraventricular catheter or external ventricular drain
  - 70 Diabetic ketoacidosis (DKA) requiring continuous infusion of insulin
  - 71 Intravenous infusion of thrombolytic agent (limited to tissue plasminogen activator [tPA] and streptokinase)
  - 72 Extracorporeal liver support using Molecular Absorbent Liver Recirculating System (MARS)
  - 73 Continuous pulse oximetry
  - 74 Patient nursed in single occupancy cubicle
  - 80\* Heated Humidified High Flow Therapy (HHHFT) (Patient receiving HHHFT)\*
  - 85\* Patient has an epidural catheter in situ\*
  - 94\* Patient has arrhythmia requiring intravenous anti-arrhythmic therapy\*
  - 95\* Patient has reduced conscious level (Glasgow Coma Score 12 or below) and hourly (or more frequent) Glasgow Coma Score monitoring\*
  - 96\* Intravenous infusion of sedative agent (Patient receiving continuous intravenous infusion of sedative agent)\*
  - 97\* Patient has status epilepticus requiring treatment with continuous intravenous infusion\*
- \* Applicable to Version 2.0 (2016 Release) only.

## Data Items

There are two parts to the PCCMDS:

- 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 PICU environment the period of critical care will be from admission to discharge from the PICU.
- b) Outside of a PICU, the critical care period runs from the first to the last day of a continuous period of paediatric 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?sho wnav=1](http://www.datadictionary.nhs.uk/data_dictionary/classes/c/critical_care_period_de.asp?sho wnav=1).

## Episode Data Items

	Data Item	Description	Formats/Codes
0	<b>STATIC DEMOGRAPHICS (PART OF APC CDS EPISODE)</b>	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	DISCHARGE DATE (HOSPITAL PROVIDER SPELL)	The date the patient was discharged from the hospital provider spell	CCYY-MM-DD
0.2	DISCHARGE METHOD CODE (HOSPITAL PROVIDER SPELL)	The method of discharge from the hospital provider spell	<ol style="list-style-type: none"> <li>1. Patient discharged on clinical advice or with clinical consent</li> <li>2. Patient discharged him/herself or was discharged by a relative or advocate</li> <li>3. Patient discharged by mental health review tribunal, Home Secretary or court</li> <li>4. Patient died</li> <li>5. Stillbirth</li> </ol>
0.3	PRIMARY DIAGNOSIS (ICD)	ICD10	ICD 10 diagnosis code
0.4	SECONDARY DIAGNOSIS (ICD)	ICD10	As for Primary Diagnosis above
1	<b>STATIC DEMOGRAPHICS (PART OF PCCMDS)</b>		
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

## Paediatric Critical Care Minimum Data Set: Requirements Specification

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

## Paediatric Critical Care Minimum Data Set: Requirements Specification

### Notes:

- a) 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 PCC 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.
- b) PRIMARY DIAGNOSIS (ICD) and SECONDARY DIAGNOSIS (ICD). This data should already be part of the patient's Consultant Episode data.
- 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 PICU or on commencement of critical care on a Ward for children and young people.
- 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 PICU or on cessation of critical care on a Ward for children and young people.
- 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 PICU should be coded as 04 = Paediatric Intensive Care Unit (Paediatric critical care patients predominate)
  - b. Critical care delivered in a Ward for children and young people should be coded as 16.
  - c. Critical care delivered in a High Dependency Unit for children and young people should be coded as 17.
  - d. Critical care delivered in a Renal Unit for children and young people should be coded as 18.
  - e. Critical care delivered in a Burns Unit for children and young people should be coded as 19.
  - f. Critical care delivered in a non standard location using the operating department for children and young people should be coded as 92.
  - g. Codes 01 to 03, 05 to 15, 90 and 91 are settings in which either CCMDS (Adult CCMDS) or NCCMDS (Neonatal CCMDS) should be recorded rather than PCCMDS. In particular:
    - i. 01 - 03, 05 - 12, 90 and 91 are settings in which CCMDS should be collected.
    - ii. 13 - 15 are settings in which NCCMDS should be collected.
  - h. Additional codes may be added to the NHS Data Dictionary as critical care services and units develop.

## Daily Data Items

	Data Item	Description	Formats/Codes
2	<b>DAILY ACTIVITY DATA</b>	Data may be recorded for each day of the PAEDIATRIC 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	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 Paediatric Critical Care listed in the Critical Care Activity Code table
2.1.1 – 2.2.20	CRITICAL CARE ACTIVITY CODE (Instance 1 to 20)	See 2.2	See 2.2
2.3	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 PCCMDS
2.3.1 – 2.3.2	HIGH COST DRUGS (OPCS) (Instance 1 to 20)	See 2.3	See 2.3

### Notes:

- 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.
- 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.
- HIGH COST DRUGS (OPCS). This field is repeated 20 times but should be used to record 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<sup>2</sup> are maintained separately to PCCMDS.

<sup>2</sup> 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 paediatric critical care)**

<b>Code Value</b>	<b>Description</b>
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)
09	Oxygen Therapy (Patient receiving additional oxygen)
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))
16	Haemofiltration (Patient received Haemofiltration)
50	Continuous electrocardiogram monitoring
51	Invasive ventilation via endotracheal tube
52	Invasive ventilation via tracheostomy tube
53	Non-invasive ventilatory support
55	Nasopharyngeal airway
56	Advanced ventilatory support (Jet or Oscillatory ventilation)
57	Upper airway obstruction requiring nebulised Epinephrine/ Adrenaline
58	Apnoea requiring intervention
59	Acute severe asthma requiring intravenous bronchodilator therapy or continuous nebuliser
60	Arterial line monitoring
61	Cardiac pacing via an external box (pacing wires or external pads or oesophageal pacing)
62	Central venous pressure monitoring
63	Bolus intravenous fluids (> 80 ml/kg/day) in addition to maintenance intravenous fluids
64	Cardio-pulmonary resuscitation (CPR)
65	Extracorporeal membrane oxygenation (ECMO) or Ventricular Assist Device (VAD) or aortic balloon pump
66	Haemodialysis (acute patients only i.e. excluding chronic)
67	Plasma filtration or Plasma exchange
68	ICP-intracranial pressure monitoring
69	Intraventricular catheter or external ventricular drain
70	Diabetic ketoacidosis (DKA) requiring continuous infusion of insulin
71	Intravenous infusion of thrombolytic agent (limited to tissue plasminogen activator [tPA] and streptokinase)
72	Extracorporeal liver support using Molecular Absorbent Liver Recirculating System (MARS)
73	Continuous pulse oximetry
74	Patient nursed in single occupancy cubicle
80*	Heated Humidified High Flow Therapy (HHHFT) (Patient receiving HHHFT)*
85*	Patient has an epidural catheter in situ*
94*	Patient has arrhythmia requiring intravenous anti-arrhythmic therapy*
95*	Patient has reduced conscious level (Glasgow Coma Score 12 or below) and hourly (or more frequent) Glasgow Coma Score monitoring*
96*	Intravenous infusion of sedative agent (Patient receiving continuous intravenous infusion of sedative agent)*
97*	Patient has status epilepticus requiring treatment with continuous intravenous infusion*
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 PCCMDS**

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 being made up exclusively of days where the only recorded CCAC is 99.
5. Removing any critical care periods identified in (4).