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Emergency Care Data Set: CDS Version 6.2.2 Type 011

Requirements Specification

Data Coordination Board

This information standard (DCB0092-2062) has been approved for publication by the Department of Health and Social Care 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 Data Coordination Board (DCB), a sub-group of the Digital Delivery Board.

This information standard comprises the following documents:

- Change Specification
- Technical Output Specification
- Implementation Guidance
- Requirements Specification.

An Information Standards Notice (DCB0092-2062 Amd 34/2018) has been issued as a notification of use and implementation timescales. Please read this alongside the documents for the standard.

The controlled versions 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

Term	Abbreviation	Description
Accident and Emergency	A&E	Also referred to as Accident and Emergency Departments. These may be either major units, providing 24-hour service seven days a week to which the great majority of emergency ambulance cases are taken, or small units commonly called casualty departments, in which services are often only available for limited hours and which may not deal with emergency ambulance cases.
Accident and Emergency Department Type		<p>Type 1: Emergency departments are a consultant led 24 hour service with full resuscitation facilities and designated accommodation for the reception of accident and emergency patients.</p> <p>Type 2: Consultant led mono specialty accident and emergency service (e.g. ophthalmology, dental) with designated accommodation for the reception of patients.</p> <p>Type 3: Other type of A&E/minor injury activity with designated accommodation for the reception of accident and emergency patients. The department may be doctor led or nurse led and treats at least minor injuries and illnesses and can be routinely accessed without appointment. A service mainly or entirely appointment based (for example a GP Practice or Out-Patient Clinic) is excluded even though it may treat a number of patients with minor illness or injury. Excludes NHS walk-in centres.</p> <p>Type 4: NHS walk in centres.</p> <p>Note: Urgent treatment centres (UTCs) are community and primary care facilities providing access to urgent care for a local population. All UTCs are classed as Type 3 Emergency Care Departments.</p>
Commissioning Data Sets	CDS	<p>The Commissioning Data Set is the basic structure used for the submission of commissioning data to the Secondary Uses Service and is currently designed to be capable of individually conveying many different Commissioning Data Set structures encompassing Accident and Emergency Attendances, Outpatient Attendances, Future Attendances, Admitted Patient Care and Elective Admission List data etc.</p> <p>CDS v6.2.1, version 1.0, introduced CDS Type 011 - ECDS, which from 1st April 2019 will replace CDS Type 010 - Accident and Emergency CDS.</p>

		For this release, the standard is renamed Emergency Care Data Set: CDS Version 6.2.2 Type 011.
Data Coordination Board	DCB	Empowered by the Health and Social Care Act 2012, the DCB has delegated responsibility for approving information standards for the health and social care system in England. The DCB membership is drawn from a range of organisations operating within health and social care.
Electronic Data Transfer	EDT	EDT is used to transfer batch data securely to SUS+. Note: From 1 st June 2019 all CDS will be sent to SUS+ using MESH.
Emergency Department Information System	EDIS	An electronic health record system used to manage data in support of Emergency Department patient care and operations.
General Data Protection Regulation	GDPR	The GDPR forms part of the data protection regime in the UK, together with the new Data Protection Act 2018 (DPA 2018). The main provisions of this apply, like the GDPR, since 25 th May 2018.
Hospital Episode Statistics	HES	National statistical data warehouse for England of the care provided by NHS hospitals and for NHS hospital patients treated elsewhere. HES is the data source for a wide range of healthcare analysis for the NHS, Government and many other organisations and individuals.
Messaging Exchange for Social Care and Health	MESH	MESH is used to transfer electronic messages, directly and securely from one application to another. MESH is used for submission of CDS Type 011 to Secondary Uses Service (SUS). MESH will be used for submission of all CDS types from June 2019.
National Tariff		A set of prices and rules to help providers of NHS care and commissioners provide best value to their patients.
Organisation Data Service	ODS	The Organisation Data Service (ODS) responsibilities include publishing organisation and practitioner codes, along with related national policies and standards.
Public Health England	PHE	An executive agency, sponsored by the Department of Health and Social Care to protect and improve the nation's health and wellbeing, and reduce health inequalities.
Role Based Access Control	RBAC	RBAC is the process through which a national set of job roles, activities and workgroups can be applied to grant users' access to functionality and indirectly to data within NHS national (Spine) services.
Referral to Treatment	RTT	Waiting Times measurement policy for consultant led and Allied Health Professional activity, which monitors the waiting time between the referral of a patient to a service, to the time they receive first definitive treatment for their condition.
Standardisation Committee for Care Information	SCCI	The Committee, prior to being replaced by the Data Coordination Board on 1 st April 2017, oversaw the development, assurance and approval of information standards, data collections and data extractions.

Secondary Uses Service	SUS	<p>The Secondary Uses Service (SUS) is the single, comprehensive repository for healthcare data in England which enables a range of reporting and analyses to support the NHS in the delivery of healthcare services.</p> <p>SUS is a secure data warehouse that stores this patient-level information in line with national standards and applies complex derivations which support national tariff policy and secondary analysis.</p> <p>An upgrade to SUS was made in July 2017, after which it was renamed SUS+.</p>
Technical Output Specification	TOS	<p>The Technical Output Specification fully defines each data item within the data set. This document splits the data set into a number of groups, each containing data items and values.</p> <p>The 'Change Control' tab within this document defines the individual changes made between releases.</p> <p>Note: SNOMED CT terminology and other items such as validations and sort orders are not included in the TOS, but are instead included in the Enhanced TOS (E TOS). This is to allow required terminology updates on a bi-annual basis (April and October) without the need to update this standard.</p>
Enhanced Technical Output Specification	E TOS	<p>The Enhanced Technical Output Specification fully defines each data item within the data set. This document splits the data set into a number of groups, each containing data items and values. SNOMED CT terminology and other items such as validations and sort orders are also included.</p> <p>The 'Change Control' tab within this document defines the individual changes made between releases.</p>
Treatment Function Code	TFC	<p>A division of clinical work based on Main Specialty but incorporating approved sub-specialties and treatment interests used by lead care professionals including but not limited to Consultants.</p>
Technology Reference data Update Distribution	TRUD	<p>Technology Reference data Update Distribution (TRUD) is a website hosted by NHS Digital. Technology Reference data Update Distribution (TRUD) provides a mechanism for NHS Digital to license and distribute reference data to interested parties.</p>
Urgent Treatment Centre	UTC	<p>Urgent treatment centres (UTCs) are community and primary care facilities providing access to urgent care for a local population. All UTCs are classed as Type 3 Emergency Care Departments.</p>
Extensible Markup Language	XML	<p>XML is a markup language designed to carry data, not to display data. It is the CDS XML schemas which carry data in the Commissioning Data Set format between health care providers and the Secondary Uses Services (SUS).</p>

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1. Purpose

Commissioning Data Set (CDS) is an existing, approved information standard with version CDS 6.2 currently operational across the health service. This specification only concerns CDS Type 011, within the existing CDS 6.2.

This document precisely defines the CDS Type 011 – Emergency Care Data Set (ECDS), which from 31st March 2019, replaces CDS Type 010 A&E within CDS v6.2. This document describes the standard, where and why it applies and what is required of stakeholders to comply. This document should be read in conjunction with the accompanying change specification, implementation guide and technical output specification (TOS). The guidance provided only relates to the submission of CDS Type 011.

For this release the standard is renamed Emergency Care Data Set: CDS Version 6.2.2 Type 011.

Section 1 of the supporting Implementation Guidance includes a description of the additional documentation available and how they may be used by both existing and new users.

Note: In this release SNOMED CT concepts are no longer included in the TOS. A full list of SNOMED concepts is however included in the separately published Enhanced Technical Output Specification (E TOS), as are other value-added items such as sort orders and validation rules. TRUD concept references are however included in the TOS. This amendment is to allow the E TOS to be efficiently updated with required terminology following each bi annual SNOMED CT release (April and October). Further details on this distinction is included in the Implementation Guidance, including a diagram to explain the difference between the TOS and E TOS.

1.1 Background

The CDS v6.2 are the primary mechanism for the national reporting of secondary care activity which is either NHS funded, and/or provided by NHS Organisations.

CDS are patient level data sets intended to deliver robust, comprehensive, nationally consistent and comparable person-based information on activity to support a variety of secondary use purposes (i.e. not for the direct care of the patient).

These include to:

- Monitor and manage NHS service agreements
- Develop commissioning plans
- Support the Payment by Results processes
- Support NHS Comparators
- Monitor Health Improvement Programmes
- Underpin clinical governance
- Understand the health needs of the population

The Department of Health and Social Care requires accurate data for the following types of patient activity:

- Urgent and Emergency Care activity
- Outpatient Appointments (including Did Not Attends)
- Admitted Patient Care (Hospital Admissions)
- Elective Admission Lists

This includes all secondary care activity of this nature undertaken by NHS Hospital Providers, including patients receiving private treatment, and NHS patients treated electively in the independent sector (including Any Qualified Provider) and overseas.

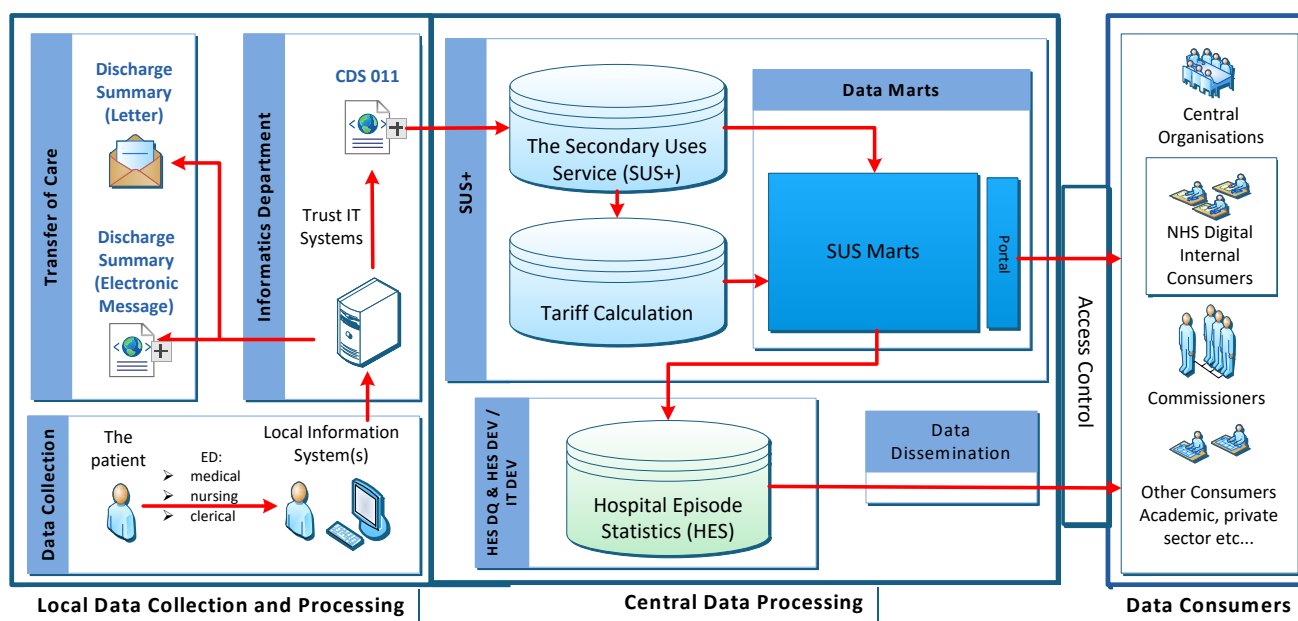
CDS are securely submitted to the SUS+ in XML format and form the basis of the HES data set.

The primary purpose of CDS Type 010 was to support a variety of secondary use purposes. The CDS Type 011 - ECDS, is closely aligned with the care and management of the patient, and the information collected is dual-purpose; meeting an existing range of secondary uses and, in some instances, for the direct care of the individual (primary uses).

ECDS is structured such that data collection for primary and secondary uses wherever possible are aligned to maximise data quality that benefits patients, staff, commissioners, researchers and the wider NHS.

The ECDS does not intend to alter clinical practice, rather to streamline already existing practices and to introduce consistency.

Figure 1: A high-level view of the flow of ECDS data



The relative costs and complexity of delivering emergency care have changed over recent years, due to:

- External factors including: increasing demand; access to alternative sources of care; patient preferences; perceived value and consistency of service.
- Internal factors including: pressure to avoid admitting patients unnecessarily; the front-loading of testing and decision making, which is now performed in A&E Departments; increased subspecialisation of hospital practice with a reduced number of 'generalist' hospital doctors.

The Emergency Care Data Set project team, which consists of representatives from the Royal College of Emergency Medicine, NHS England and NHS Digital have identified the following issues in the current data which are resolved by CDS type 011:

- There is a need for **accurate and relevant information regarding patients presenting to A&E Departments** in England, and the quality of care delivered. For example:
 - Accurate recording of the source of the patient's referral to the Emergency Department.
 - The patient's chief complaint (the primary clinical reason for the attendance) captured consistently and submitted centrally.
 - Detailed information capturing what happens to patients during their Emergency attendance, e.g. when patients are referred to inpatient services for assessment or admission.
 - Where patients go after their treatment in the Emergency Department is complete.
- The **complexity and acuity of Emergency department patients, and the value added by Emergency departments**, are consistently described and able to be understood through the detailed data collected.
- **Better diagnostic data which gives an enhanced understanding of patient need, activity and outcomes (and so value to attendance).**
- **Consistent data on how patients use Emergency Departments**, other urgent care services, and overall patient flow in the urgent care system. This allows understanding of patient access patterns, which allows appropriate planning.
- **Understanding of who is doing what and when within Emergency Departments.** This helps ensure that patients receive safe and effective care when they need it.
- **Bring together disparate local and national initiatives aimed at improving urgent care services to encourage consistency**, and also to describe the work done across a range of providers in a common language.
- **Understand Emergency Department attendances relating to injury** and other modifiable factors to identify patterns that may be amenable to targeted interventions that will improve public health.
- Facilitates **targeted prevention strategies** that could reduce the number of Emergency Department attendances.
- **Consistently monitor illness data arising from patients presenting to Emergency Departments**, provides public health awareness of the current situation, as well as early warning of emerging population health threats. Public Health England (PHE) has an Emergency Department Syndromic Surveillance System (EDSSS) which seeks to utilise national data.

CDS Data Flow Definitions

The Commissioning Data Set is the basic structure used for the submission of commissioning data to the SUS+ and is designed to be capable of individually conveying many different Commissioning Data Set structures encompassing Emergency Care, Outpatient Attendances, Future Attendances, Admitted Patient Care and Elective Admission List data.

Commissioning Data Set Messages have been defined in specific components known as a CDS type. Each Commissioning Data Set Type as configured into the Commissioning Data

Set Message carries only one specific Commissioning Data Set Type, an example being the Finished Consultant Episode Commissioning Data Set Type.

CDS v6.2.2 Type 011 - ECDS will, from 31st March 2019, replace CDS Type 010 A&E. From this date no submissions for activity undertaken from 1st April 2019 onwards will be possible as CDS Type 010. The last CDS Type 010 submission, for providers not yet transitioned to CDS Type 011, will be March 2019 reconciliation data submitted in May 2019. Once data is submitted as CDS Type 011 it must not also be submitted as Type 010 (and vice versa).

Prior to 31st March 2019, providers who implement in a phased approach, such as Type 1 or 2 departments before Type 3 or 4 departments may need to submit CDS types 010 and 011 for specific data associated with each department type (never submitting the same data as both Type 010 and 011).

Full details of the current baseline Commissioning Data Sets (CDS) including the specification for the CDS types outlined above, definitions and supporting guidance, XML schemas and submission rules are available from the NHS Data Model and Dictionary¹.

CDS types include:

Emergency Care

CDS Type	CDS Title	CDS Description	Status	Submission Frequency
Emergency Care Data Set: Commissioning Data Set version 6.2.2 Type 011(Replaces CDS Type 010 from 1st April 2019)				
011	Emergency Care Data Set	Contains details of all Accident and Emergency Attendances	Mandatory	Daily

Supporting CDS Types

The table below lists the Commissioning Data Set Interchange and Message Controls to support the national flow of CDS information. These headers and trailers help to specify the data items used for data handling and management within the Secondary Uses Service.

CDS Type	CDS Title	CDS Description	Status	
Commissioning Data Set Interchange and Message Controls				
001	CDS Interchange Header	Contains the metadata that describes the identity and addressing information for the Commissioning Data Set submission and signals the start of a CDS submission.	Mandatory	Must be submitted for every CDS Interchange

¹ http://www.datadictionary.nhs.uk/web_site_content/navigation/commissioning_data_sets_menu.asp

002	CDS Interchange Trailer	Contains the metadata that describes the identity and addressing information for the Commissioning Data Set submission and signals the end of a CDS submission.	Mandatory	Must be submitted for every CDS Interchange
003	CDS Message Header	Contains the metadata that describes the content of the message and signals the start of CDS message.	Mandatory	Must be submitted for every CDS Message
004	CDS Message Trailer	Contains the metadata that describes the content of the message and signals the end of CDS message.	Mandatory	Must be submitted for every CDS Message
Commissioning Data Set Transaction Header Group				
005B	CDS Transaction Header Group - Bulk Update Protocol	Contains the metadata that describe the controls for a bulk submission.	Mandatory	Must be submitted for every bulk CDS submission

Or;

005N	CDS Transaction Header Group - Net Change Protocol	Contains the metadata that describe the controls for a net submission.	Mandatory	Must be submitted for every net CDS submission
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The current CDS v6.2 uses the EDT mechanism to transport and submit XML files to the Secondary Uses Service (SUS). EDT will continue to be used for CDS Types, except CDS v6.2.2 Type 011 – ECDS, until 1st June 2019. CDS v6.2.2 Type 011 – ECDS uses the Messaging Exchange for Social Care and Health (MESH) to transport and submit files to the Secondary Uses Service. From 1st June 2019 onwards all CDS will be sent to SUS+ via MESH.

Further information about MESH, in addition to what is presented in this document, is available from NHS Digital².

² <https://digital.nhs.uk/messaging-exchange-social-care-health>

2. Overview

2.1 Summary

Standard	
Standard Number	DCB0092-2062
Standard Title	Commissioning Data Sets (CDS)
Standard Description	<p>CDS v6.2 is the primary mechanism for the national reporting of secondary care activity which is either NHS funded, and/or provided by NHS Organisations.</p> <p>CDS are patient level data sets intended to deliver robust, comprehensive, nationally consistent and comparable person-based information on activity to support a variety of secondary use purposes (i.e. not for the direct care of the patient).</p> <p>These include:</p> <ul style="list-style-type: none"> • Monitor and manage NHS service agreements • Develop commissioning plans • Support the Payment by Results processes • Support NHS Comparators • Monitor Health Improvement Programmes • Underpin clinical governance • Understand the health needs of the population <p>The Department of Health and Social Care requires accurate data for the following types of patient activity:</p> <ul style="list-style-type: none"> • Accident and Emergency attendances and outcomes • Outpatient Appointments (including Did Not Attends) • Admitted Patient Care (Hospital Admissions) • Elective Admission Lists <p>This includes all secondary care activity of this nature undertaken by NHS Hospital Providers, including patients receiving private treatment, and NHS patients treated electively in the independent sector (including Any Qualified Provider) and overseas.</p> <p>CDS are securely submitted to the Secondary Uses Service (SUS+) in XML format and form the basis of the Hospital Episode Statistics (HES) data set.</p> <p>The primary aim of CDS Type 010 was to support a variety of secondary use purposes. The Emergency Care Data Set (CDS v6.2.2), which will fully replace the existing CDS Type 010 A&E from 1st April 2019, is closely aligned with the care and management of the patient, and the information collected will be dual-purpose, including; for the existing range of secondary uses and in some instances for the direct care of the individual (primary uses).</p> <p>In CDS v6.2.2, ECDS, the developers have sought to align data collection for primary and secondary uses wherever possible as this</p>

	<p>ensures data quality that benefits patients, staff, commissioners, researchers and the wider NHS.</p> <p>The ECDS does not intend to alter clinical practice, rather to streamline already existing practices and to introduce consistency.</p>
Release	
Release Number	Amd 34/2018
Release Title	Emergency Care Data Set: CDS Version 6.2.2 Type 011
Release Description	<p>This change introduces a series of minor amendments to the existing ECDS standard, CDS v6.2.1 Type 011 - ECDS.</p> <p>The daily submission of ECDS applies to all Accident and Emergency Department Types, Types 1, 2, 3 and 4 (including Urgent Care Centres who may not have previously submitted the CDS Type 010 A&E).</p> <p>Providers must continue to submit all other CDS Types within the current CDS v6.2, using the existing mechanisms to do so, with the exception of CDS Type 010 A&E, which is replaced from 31st March 2019, by CDS v6.2.2 Type 011 - ECDS. The final CDS Type 010 submission will be March 2019 reconciliation, submitted in May 2019. The full submission timetable is available within Payment by Results guidance³.</p> <p>When submitting CDS v6.2.2 Type 011 - ECDS on a daily basis, this should be automated from the Emergency Department Information System. The existing mechanism to flow CDS Type 010 A&E data will be available until the transition to Type 011 is completed by 31st March 2019. The mechanism to flow the data for CDS v6.2.2 Type 011 - ECDS is via the Message Exchange for Social Care and Health (MESH).</p> <p>CDS v6.2.2 Type 011 - ECDS data set includes code sets represented as NHS Data Dictionary-defined National Codes or SNOMED CT concepts. As part of this release SNOMED CT concepts are no longer included in the TOS, which instead includes references to the appropriate concepts held on Technology Reference data Update Distribution (TRUD). A full list of SNOMED concepts is however included in the separately published E TOS⁴.</p> <p>This standard supports the following areas:</p> <ul style="list-style-type: none"> • National Tariff • Accident and Emergency Clinical Quality Indicators (CQIs) • Mental Health • Improving Quality and Value of Hospital Data • Injury Surveillance • Local analysis by providers and commissioners
In Scope	The standard defines a TOS which describes the data submission required for CDS v6.2.2 Type 011 ECDS, to be sourced from clinical

³ <https://digital.nhs.uk/services/secondary-uses-service-sus/payment-by-results-guidance>

⁴ <https://digital.nhs.uk/data-and-information/data-collections-and-data-sets/data-sets/emergency-care-data-set-ecds>

	<p>systems. All services funded, and/or provided, by the NHS providing emergency department type 1, 2, 3 or 4 services are in scope.</p> <p>Note: Urgent treatment centres (UTCs) are community and primary care facilities providing access to urgent care for a local population. All UTCs are classed as Type 3 Emergency Care Departments.</p>
Implementation Completion Date	<p>All providers of type 1, 2, 3 or 4 Accident and Emergency Department Types MUST submit CDS v6.2.2 Type 011 – ECDS to the Secondary Uses Service (SUS) on a daily basis using MESH (see notes 1 and 2 below). Changes contained within this release MUST be implemented, such as to allow collection and extraction in the required manner, from 1st April 2019.</p> <p>Note 1: CDS Type 011 – ECDS submission using MESH commenced with the initial release of this standard, from April 2017.</p> <p>Note 2: The initial release of this standard mandated the following:</p> <ul style="list-style-type: none"> • Type 1 and 2 departments MUST make daily submissions, using CDS Type 011, from 1st April 2018 and, • Type 3 and 4 departments MUST make daily submissions, using CDS Type 011, from 1st October 2018. • Implementation of the previous release of the standard must be compliant with these dates.

2.2 Supporting Products

Reference	Title
DCB0092-2062	Emergency Care Data Set: CDS v6.2.2 Type 011 - Requirements Specification
DCB0092-2062	Emergency Care Data Set: CDS v6.2.2 Type 011 - Implementation Guide
DCB0092-2062	Emergency Care Data Set: CDS v6.2.2 Type 011 - Technical Output Specification

2.3 Related Standards

Ref #	Reference	Title
1	ISB 0092	CDS Type 6.2
2	SCCI0034	SNOMED CT
3	DCB1605	Accessible Information
4	ISB 0149	NHS Number
5	ISB 0149-02	NHS Number for Secondary Care
6	ISB 1594	Information Sharing to Tackle Violence (ISTV)
8	ISB 1606	Trauma Audit and Research Network (TARN)
9	SCCI2112	Female Genital Mutilation Risk Indication System (FGM RIS) - Local System Integration

2.4 Contacts

Sponsor	
Name	Tim Donohoe
Organisation	Department of Health and Social Care
Email Address	tim.donohoe@dh.gsi.gov.uk
Developer	
Name	Tom Hughes
Organisation	Royal College of Emergency Medicine
Email Address	dataset.development@nhs.net
Maintenance Manager	
Name	ECDS Team
Organisation	NHS Digital
Email Address	dataset.development@nhs.net

3. Requirements

3.1 Overview

The associated ECDS Change Specification outlines the changes made in this release.

Providers which have previously submitted CDS v6.2 Type 010 must implement CDS v6.2.2 Type 011 – ECDS before 1st April 2019.

Providers who deliver urgent and emergency care services, but do not currently submit CDS v6.2 Type 010 need to submit CDS v6.2.2 Type 011 – ECDS immediately.

Note: From 1st June 2019 onwards all CDS will be sent to SUS+ via MESH.

The table below outlines the changes for providers, based on their current CDS 6.2 submission status:

Providers current CDS 6.2 Submission Status	Expected Change for Providers
Providers submitting CDS 6.2.1 Type 011 - ECDS	<ul style="list-style-type: none"> Continue to submit CDS Type 011 via MESH Implement CDS 6.2.2 Type 011 changes by 1st April 2019
Providers submitting CDS 6.2, within one file, including CDS Type 010, via EDT	<ul style="list-style-type: none"> Separate the CDS Type 010 elements from current CDS 6.2 file pack where submissions are made including all CDS Types within one file Continue to submit remaining CDS Types within CDS 6.2 via EDT Submit CDS Type 011, instead of CDS Type 010, via MESH
Providers submitting CDS 6.2, within separate files or independently of each other, including CDS Type 010, via EDT	<ul style="list-style-type: none"> Stop submitting CDS Type 010 as a separate file Continue to submit remaining CDS Types within CDS 6.2 via EDT Submit CDS Type 011, instead of CDS Type 010, via MESH
Providers only submitting CDS Type 010 via EDT	<ul style="list-style-type: none"> Stop submitting CDS Type 010 via EDT Submit CDS Type 011, instead of CDS Type 010, via MESH
Providers not required to submit CDS Type 010, but submit other CDS Types within CDS 6.2	<ul style="list-style-type: none"> No change, continue to submit relevant CDS Types (excluding CDS Type 010) via EDT. From 1st June 2019 all CDS Type submissions must be undertaken using MESH
Accident and Emergency Departments that currently do not submit any CDS Types within CDS 6.2	<ul style="list-style-type: none"> Submit CDS Type 011 via MESH

3.2 Information Specification

The CDS Type 011 ECDS submission requirements are shown below.

#	Requirement ⁵
	Healthcare Providers
1	All providers of type 1, 2, 3 or 4 Accident and Emergency Department Types MUST submit CDS v6.2.2 Type 011 – ECDS to the Secondary Uses Service (SUS+) on a daily basis. This will require providers to ensure their suppliers of relevant clinical systems, patient administration systems and / or XML Middleware supplier can incorporate the required changes to meet this capability by dates shown in conformance criteria below. The definition of daily submission is described in an NHS Digital issued ECDS Conformance Criteria document ⁶ .
2	All providers of CDS v6.2.2 Type 011 - ECDS SHOULD automate their data submission processes to provide daily data. This will require all providers to ensure their suppliers of relevant clinical systems, patient administration systems and/ or XML Middleware suppliers can incorporate the required changes to meet this capability.
3	All providers of CDS v6.2.2 Type 011 - ECDS SHOULD submit changes using the Data Set Net Change Protocol . This will require all providers to ensure their suppliers of relevant clinical systems, patient administration systems and/ or XML Middleware suppliers can incorporate the required changes to meet this capability.

3.3 Conformance Criteria

This section describes the tests that can be measured to indicate that the information standard is being used correctly by an organisation (conformance criteria met).

Healthcare Providers

The previous version of this standard mandated the following:

- Type 1 and 2 departments **MUST** make **daily** submissions, using CDS Type 011 and MESH, from 1st April 2018 and,
- Type 3 and 4 departments **MUST** make **daily** submissions, using CDS Type 011 and MESH, from 1st October 2018.

Additionally type 1 and 2 conformance criteria were included for data quality compliance.

This release of CDS v6.2.2 builds on this mandate.

#	Conformance Criteria
1	From 1 st April 2019 ALL Accident and Emergency Department Types MUST have : <ul style="list-style-type: none"> • Made submissions using CDS Type 011 • Returned data on a daily* basis AND (where applicable*) 100% of patient records MUST have a valid record for:

⁵ <https://www.ietf.org/rfc/rfc2119.txt>

⁶ <https://digital.nhs.uk/data-and-information/data-collections-and-data-sets/data-sets/emergency-care-data-set-ecds>

- Chief Complaint;
- Diagnosis;
- Measure of acuity;
- Discharging clinician (using the GMC/NMC/HPC number);
- Referral source;
- Discharge status.

* Detailed definitions of 'daily' and the applicability of each data item are specified in the NHS Digital issued ECDS Conformance Criteria document⁷.

Conformance with the CDS Type 011 XML schema will be enforced through the CDS v6.2.2 schema and validation following submission to Secondary Uses Service (SUS+). Validation checks will occur regarding correct use of SNOMED CT code sets and various other validation rules, including correct format/length, enumerated national codes where applicable, and comply with the required mandate of the fields (Mandatory, Required or Optional). Additional guidance on SNOMED CT is available⁸.

Following submission any interchanges containing records that do not conform to the XML schema requirements or other necessary validation rules, i.e. field length and format, maybe rejected. In these cases, a validation report will be provided to assist the sender in the identification and resolution of issues.

4. Concept of Operation

4.1 Data Users

4.1.1 Data Collectors and Providers

- **Healthcare Professionals:** will be responsible for capturing information as part of the ongoing care of the patient, i.e. for primary use purposes as they do currently.
- **Administrative Staff:** will be responsible for capturing clerical information such as demographics.
- **Clinical coders:** If the Trust uses clinical coders to support the recording of clinical information from Emergency Departments, coders must ensure that they collect information which is either specified in the CDS v6.2.2 Type 011 - ECDS TOS or that arrangements are put in place to map what they collect to the required CDS v6.2.2 Type 011 - ECDS SNOMED CT subsets.
- **XML/Middleware Suppliers:** will develop tools and/or services to process submissions in conformant XML for submission to SUS+, specifically for CDS v6.2.2 Type 011 - ECDS via MESH.
- **Suppliers of Patient Administration (PAS) and Emergency Department Information Systems:** at the request of providers will develop systems ensuring that ECDS data items can be captured electronically and output or derived to nationally agreed standards and change existing extraction routines to produce CDS v6.2.2 Type 011 ECDS submissions.

⁷ <https://digital.nhs.uk/data-and-information/data-collections-and-data-sets/data-sets/emergency-care-data-set-ecds>

⁸ <https://isd.hscic.gov.uk/trud3/user/guest/group/0/home>.

- **Trust informatics staff:** will be responsible for the collation of ECDS information and the submission of Type 011 data to SUS+ using MESH via XML Middleware Suppliers or in-house products. This will include ensuring completeness and addressing any data quality issues identified with the information within the data set.

4.1.2 Secondary Users

Information generated through implementation of this standard will be analysed and used by users of CDS v6.2 data.

The data collected via CDS Type 011 – ECDS will enable users to analyse and compare more granular, higher quality data for reporting, audit, research and for service delivery. It will provide vital information which will support the following:

- The provision of an accurate and relevant record of why patients attend emergency departments in England, the quality of care that they receive and what happens to them after the attendance. This in turn will enable a greater understanding of patient outcomes and the value added by emergency care services.
- A greater understanding of the complexity of patients who attend emergency departments and the services required to treat them appropriately.
- A better understanding of how people access urgent and emergency care services particularly in relation to overall patient flow in the urgent care system.
- More information to help understand who is doing what and where, with the aim of achieving more effective and efficient resource deployment across urgent and emergency care services.
- A national picture of the number of patients attending emergency departments as a result of injury which will support the development of targeted prevention strategies which would in turn reduce the number of emergency department attendances and improve the lives of patients.
- Public Health syndromic surveillance via the Emergency Department Syndromic Surveillance System (EDSSS) which collects information on patient illnesses presenting to Emergency Departments and is consistently monitored to provide public health situational awareness, as well as early warning of emerging population health threats.

4.2 Use of SNOMED CT

4.2.1 What is SNOMED CT

SNOMED CT is an international clinical terminology that provides the vocabulary for systems to support the direct management of the health and care of an individual. The vocabulary consists of machine-readable codes for clinical concepts along with human readable descriptions. It is provided via a set of data files that need to be incorporated in electronic applications.

SNOMED CT provides the content for health and care related data items in software applications to enable representation of clinically relevant information consistently and reliably in a way that is processable by the computer system. This enables applications to exchange processable data across the health and care environment; provide clinical decision support tools and undertake enhanced analytics to support effective delivery of high-quality healthcare to individual people and populations. SNOMED CT is managed and maintained internationally by [SNOMED International](#) and in the UK by [NHS Digital](#). SNOMED CT is specified as the single terminology to be used across the health system in [Personalised Health and Care 2020: A Framework for Action](#).

4.2.2 SNOMED CT and Paperless 2020

In support of the NHS's move towards being paperless by 2020, SNOMED CT is used as the clinical terminology within ECDS. Further details in relation to the SNOMED CT Standard are available from NHS Digital.

This move helps to properly capture and represent the full extent and granularity of Emergency Department activity, and therefore:

- improve the quality of patient care in England's Emergency Departments
- enable an accurate understanding of the cost and value of emergency care
- facilitate improved healthcare commissioning
- provide more effective delivery of healthcare strategy and policy

Further details of how SNOMED CT should be implemented to support ECDS are available from [the ECDS User Guidance](#), available from NHS Digital.

Note: As part of this release SNOMED CT concepts are no longer included in the TOS, which instead includes references to the appropriate concepts held on TRUD. A full list of SNOMED concepts is included in the [separately published E TOS](#).

4.3 Working Practices

Full guidance, including changes to working practices, is available in the ECDS Implementation Guidance⁹.

4.4 Information Governance

4.4.1 Background

The Chief Medical Officer of England commissioned the 'Department of Health - The Caldicott Committee Report on the Review of Patient-Identifiable Information' (Dec 1997) report, to review the transfer of patient-identifiable information from NHS organisations to other NHS and non-NHS organisations. The report included 16 recommendations and suggested six principles be applied to current flows and any flows proposed in the future. 'Information: To share or not to share? The Information Governance Review' (March 2013) followed. Known as Caldicott2, it was an independent review of information sharing by Dame Fiona Caldicott at the request of the Secretary of State for Health (March 2013). This review was to ensure an appropriate balance between protection of patient information, and its use and sharing. The Government subsequently accepted the recommendations from this report (September 2013), and the 'National Data Guardian for Health and Care Review of Data Security, Consent and Opt-Outs' (June 2016) outlines the recommendations of the new data security standards.

4.4.2 Overview

CDS 6.2 currently has section 251¹⁰ approval from the Confidentiality Advisory Group to allow the flow and storage of patient identifiable data without patient consent within the national, strategic data warehouse as part of the SUS+ application.

The legal flow of CDS v6.2.2 Type 011 - ECDS data to NHS Digital is supported by a Direction issued by NHS England¹¹. The Direction does not cover the entire CDS v6.2 as this will remain subject to the section 251 approval.

⁹ <https://digital.nhs.uk/isce/publication/dcb0092-2062>

¹⁰ <http://www.legislation.gov.uk/ukpga/2006/41/section/251>

¹¹ <https://www.gov.uk/government/organisations/health-and-social-care-information-centre/about/our-governance>

NHS Digital (the operating name for the Health and Social Care Information Centre) is exempt from having to apply for section 251 support from the Confidentiality Advisory Group (CAG) when mandated to collect data via Directions from NHS England or the Department of Health and when acting as data controller. This is set out in [sections 254 and 255 of the Health and Social Care Act 2012](#).

As a result, explicit consent is not required; however, providers are required to inform patients that their information will be used to support secondary uses, and to act on any objections raised in line with their local policy.

If consent is sought and not given, then this information must not be shared and other legal routes for sharing are not available.

Where a patient explicitly objects to their data being used for secondary purposes, the provider has the option of not flowing the records for this patient, as directed by their local Caldicott Guardian.

Further information on a patient's personal information choices can be found at NHS Digital's, "[How we look after information](#)"

A [Data Provision Notice \(DPN\)](#), produced by NHS Digital will be issued before the commencement of version 6.2.2 data submissions. This will confirm the structure and content of the collection and will be used to confirm NHS Digital's legal requirement to collect the data.

4.4.3 General Data Protection Regulation (GDPR)

Providers (including the Caldicott Guardian) should ensure they are aware of requirements in respect of the [General Data Protection Regulation \(GDPR\)](#). Additional guidance is available on the [NHS Digital website](#).

[NHS Digital assessment confirms required compliance](#) to GDPR. During the development of this release of the standard a Data Protection Impact Assessment (DPIA) was completed. Any concerns regarding information governance should be addressed to the developer of the standard.

4.4.4 Type 1 Opt-out – Do not apply to ECDS

If a patient does not want information that identifies them to be shared outside their GP practice, for purposes beyond their direct care then the patient can register a type 1 opt-out with their GP practice. This prevents their personal confidential information from being used other than in particular circumstances required by law, such as a public health emergency like an outbreak of a pandemic disease.

Note: Do not apply to ECDS.

4.4.5 National Data Opt-Out

NHS Digital collects information from a range of places where people receive care, such as hospitals and community services. If a patient does not want their personal confidential information to be shared outside of NHS Digital, for purposes other than direct care then the patient can register an opt-out with their GP practice.

A [Direction](#) from the Secretary of State sets out the Department of Health and Social Care policy as to how national data opt-out, which replaces Type 2 objections, should be applied.

Existing Type 2 objections will be converted to national opt-outs. NHS Digital will inform people who have previously expressed a Type 2 objection of this change and inform them of the new national data opt-out mechanism. NHS Digital is directed to continue to collect Type 2 objections set in GP Practices until 1st October 2018 and convert these to national data opt-outs.

Where a patient objects, the NHS has the option to flow the data without patient identifiers such as the NHS Number or not flow the data at all, as directed by the local Caldicott Guardian. This remains the same as currently applies to CDS Type 010 A&E.

4.4.6 Patient Identifiable Data Items

Commissioning Data Sets (CDS) include several patient identifiable items, e.g.

- NHS Number
- Local Patient Identifier
- Name
- Address
- Date of Birth
- Postcode of Usual Address.

CDS necessarily includes patient identifiers to support the linkage of activity to create a complete picture of the patient pathway, for example across Emergency Care, Admitted Patient Care and Outpatient Appointments, and also to support commissioning of health services and remuneration for activity undertaken by providers.

4.4.7 Secondary Care Use

Any secondary care uses of data must be subject to compliance with the appropriate legal basis, and service providers should review their own information governance standards to ensure they are complying accordingly. Required assurances exist for ECDS.

4.5 Ethics

There were not considered to be any ethical issues associated with the move to CDS v6.2.1 Type 011 - ECDS. The Ethics and Confidentiality Committee (ECC) have not raised any concerns about the changes to CDS 6.2. Version 6.2.2 is a minor update to version 6.2.1, as described, with no known ethical implications.

4.6 Clinical Safety

Commissioning Data Sets (CDS) utilise information already routinely collected in a variety of Trust systems and collated in a non-clinical setting for secondary uses. There are minimal patient safety or clinical risk implications or potential adverse effects for patients in complying with the requirements of the data set. Any risks identified have been mitigated.

A clinical safety report was produced for the first release of ECDS following a hazard assessment workshop. Consensus was that there were minimal clinical safety risks associated with the implementation of the ECDS as the data set is not primarily used as a tool to support clinical decision making but rather to record information about specific episodes of care. In support of ECDS v6.2.2 the safety case report was updated and approved by the NHS Digital Clinical Safety Group.

4.7 Clinical Governance

Commissioning Data Sets support clinical governance by maintaining and improving the quality of patient care within the health system through the national reporting of comparable primary use data for secondary use purposes to standardised definitions to support transparency. This supports (a) the audit of providers by organisations such as Care Quality Commission, Public Health Observatories (PHOs) and other research and commercial organisations and (b) the identification of outliers to indicate areas to focus limited resources for investigation purposes.

4.8 Data Quality

The ECDS does not mandate design of local systems or specific local data quality measures. However, highlighted below, are areas the data set developers recommend should be considered by data providers within their local governance arrangements to ensure good data quality in respect of the extracted submission.

4.8.1 Corporate Data Quality Framework

Each organisation will have its own corporate framework for managing data quality in respect to data collection, submission and publication. Such a framework is likely to involve a number of components such as leadership and direction from a senior officer, organisational and departmental data quality objectives, data quality audits and a performance management framework. It is recommended that appropriate components of the corporate data quality framework include the ECDS, so that data quality relating to the data set is at the heart of the organisation's data quality framework.

4.8.2 Data Quality Risks

At organisational, departmental and individual levels, risks related to data quality should be identified and mitigated. Examples of risks which could be considered, are:

- Organisational - does the organisation have corporate policy and objectives for managing data? Is there a senior officer with overall responsibility for data quality?
- Team - are all relevant staff aware of the purpose and importance of collecting data for the national data set? Are there sufficient resources available to continue data collection during staff absences?
- Individuals - do staff have sufficient time within their work routine to collect the data? Is there a need for additional training so staff can possess appropriate skills to collect the data (especially where systems are upgraded)?

4.8.3 Organisational and Departmental Objectives

In any organisation, resources will be deployed towards organisational and departmental objectives.

The organisation's performance management framework will identify the extent to which objectives are met, and, where necessary, revised.

Where the data set is used to monitor progress towards objectives, there will be greater emphasis on collecting good quality data. It may be necessary to embed the data set subject area into the organisation's performance management framework (and therefore set local

objectives) to ensure data is collected in a reliable and timely manner. Additional support is available via NHS Digital¹².

The structure and internal processes of each data provider will vary and, to a certain extent, depend on the priority given to IT and informatics. Some organisations will have well developed processes and systems that, with minimum effort, will accommodate ECDS. Other organisations, for whom processes, and systems are underdeveloped, or who will be new to the submission of ECDS may require significant changes. In such instances, organisations may choose to plan the implementation of this Information Standard as a priority to ensure sufficient resources are deployed for conformance.

The implementation of a new or re-engineered process may be more successful where organisations use peer organisations to identify and replicate areas of good practice.

4.8.4 Timeliness

The data should be entered in local systems and submitted in a timely manner, so that the data set can deliver meaningful, relevant and timely reports for stakeholders. This should be followed by a review of data quality to implement improvement actions.

4.8.5 National Data Quality

The submission of CDS Type 011 – ECDS encourages a move towards an automated daily submission.

In all cases a submission will be expected to meet the necessary CDS v6.2.2 XML schema validation, which will go some way to ensure that only valid formats and codes are submitted. The validations, which are [described in the ECDS E TOS](#), only relate to the structure and validity of the submitted data.

Further validation will involve the continued analysis of submitted CDS Type 011 – ECDS, to identify potential data quality issues for an individual provider or nationally. This will result in NHS Digital working with the provider to ensure that they are aware of potential data quality issues and identifying appropriate resolutions. It will also result in the publication of improved guidance or consideration of future changes to CDS.

[Data quality analysis is routinely published](#) which should be regularly reviewed to understand the quality of data submitted in support of national analysis.

4.9 Data availability

Requests for access to ECDS data should be made to [NHS Digital Independent Group Advising on the Release of Data \(IGARD\)](#). IGARD considers all requests for dissemination of confidential information, as defined in Section 263 of the Health & Social Care Act, through the Data Access Request Service (DARS). It aims to improve transparency, accountability, quality and consistency through robust, independent scrutiny of NHS Digital data distributions.

¹² <https://digital.nhs.uk/data-and-information/data-collections-and-data-sets/data-sets/emergency-care-data-set-ecds>

5. Implementation and Use

5.1 Implementation and user guidance

Implementation guidance (and other guidance) is available to support this release¹³
Additional user guidance is available from NHS Digital¹⁴.

5.2 Governance

NHS Digital will have overall executive responsibility for implementation of changes to CDS.

Implementation of changes to SUS+ will be managed through the SUS Programme. This will be overseen by the SUS Programme Board.

Ongoing maintenance of ECDS will be actioned via NHS Improvement and NHS Digital. Users and stakeholders can submit requests for change to: dataset.development@nhs.net

Change requests will be prioritised by the sponsor, in conjunction with the SUS User Group (SUG) and will only be progressed where a sponsor and funding can be identified and where a suitable implementation mechanism is available e.g. a SUS release.

The SUS User Group (SUG), comprising key stakeholders representing providers, system suppliers and commissioners, fulfils the role as CDS Expert Working Group.

5.3 Technical Architecture

5.3.1 Providers who also submit CDS 6.2

Providers currently submitting CDS 6.2 must continue to submit CDS 6.2 for all CDS Types, **except CDS Type 010 – A&E**, which will be replaced, from 31st March 2019, by CDS Type 011 - ECDS. All submissions following March 2019 refresh must be submitted as Type 011.

A new schema is available for CDS v6.2.2 Type 011 - ECDS (schema version 6.2.2), which must be used to submit the new Emergency Care Data Set.

CDS Type 011 is submitted via the Messaging Exchange for Social Care and Health (MESH) service. This is the primary messaging service used across the NHS. MESH is used to transfer electronic messages, directly and securely from one application to another. Other CDS types use EDT to submit data (until 1st June 2019 when all CDS schemas will be sent to SUS+ via MESH).

5.3.2 Data Validation CDS v6.2.2 Type 011 - ECDS

The EDT service carries out a range of XML data validation processes on files, giving automated feedback to the submitter on the quality of data before it is transmitted onwards to SUS+.

The MESH service does not carry out this sophisticated range of data validation processes, but a validation client that can be used locally, before submission to MESH, may be used.

¹³ <https://digital.nhs.uk/isce/publication/dcb0092-2062>

¹⁴ <https://digital.nhs.uk/data-and-information/data-collections-and-data-sets/data-sets/emergency-care-data-set-ecds>

Full data validation is carried out on receipt of the XML file at NHS Digital. Automated feedback is generated, in a similar way as with the EDT service, and made available to the user.

In this way, the migration from using EDT to using MESH closely replicates the services familiar to the historic CDS 6.2 submitter whilst adding additional features useful to the submitter that are built into the MESH service.

5.4 Providers who currently do not submit CDS 6.2

Providers who do not currently flow CDS 6.2 will need to ensure they can submit the CDS Type 011 XML schema to the Messaging Exchange for Social Care and Health (MESH) service – see below.

5.5 Using the MESH service

There are three main steps required by providers to install the MESH client:

1. Setting up a MESH account by completing the MESH application form:
<https://digital.nhs.uk/services/message-exchange-for-social-care-and-health-mesh/message-exchange-for-social-care-and-health-mesh-application-forms>
2. Setting up a MESH end point certificate
3. Installing MESH as a service.

Installation guidance for MESH is available from NHS Digital¹⁵.

This information will then be available to the Secondary Uses Services (SUS+).

SUS+ has significantly improved the security and confidentiality of data managed through a combination of:

- Comprehensive and rigorous access controls (Role Based Access Control).
- Anonymisation of data and the use of encrypted pseudonyms to replace information that could be used to identify individuals, which is accessed or transferred from the SUS+ environment.
- Enabling the linkage of data from different sources relating to the same care pathway.

Full details and guidance relating to submission of CDS to SUS+ is available from NHS Digital¹⁶.

SUS has a robust Information Governance process to ensure that the data is protected from unauthorised access. Approval to access SUS+ and view patient data is required from the Ethics and Confidentiality Committee (ECC).

Users of SUS+ are issued with an NHS Care Records Service Smartcard, a pass code and Unique User Identification (UUID) to ensure data is kept secure. SUS will provide access and outputs in clear or pseudonymised form dependent upon each user's access rights. Where access to pseudonymised data is appropriate, elements which could identify a patient are encoded in order to provide greater protection of privacy.

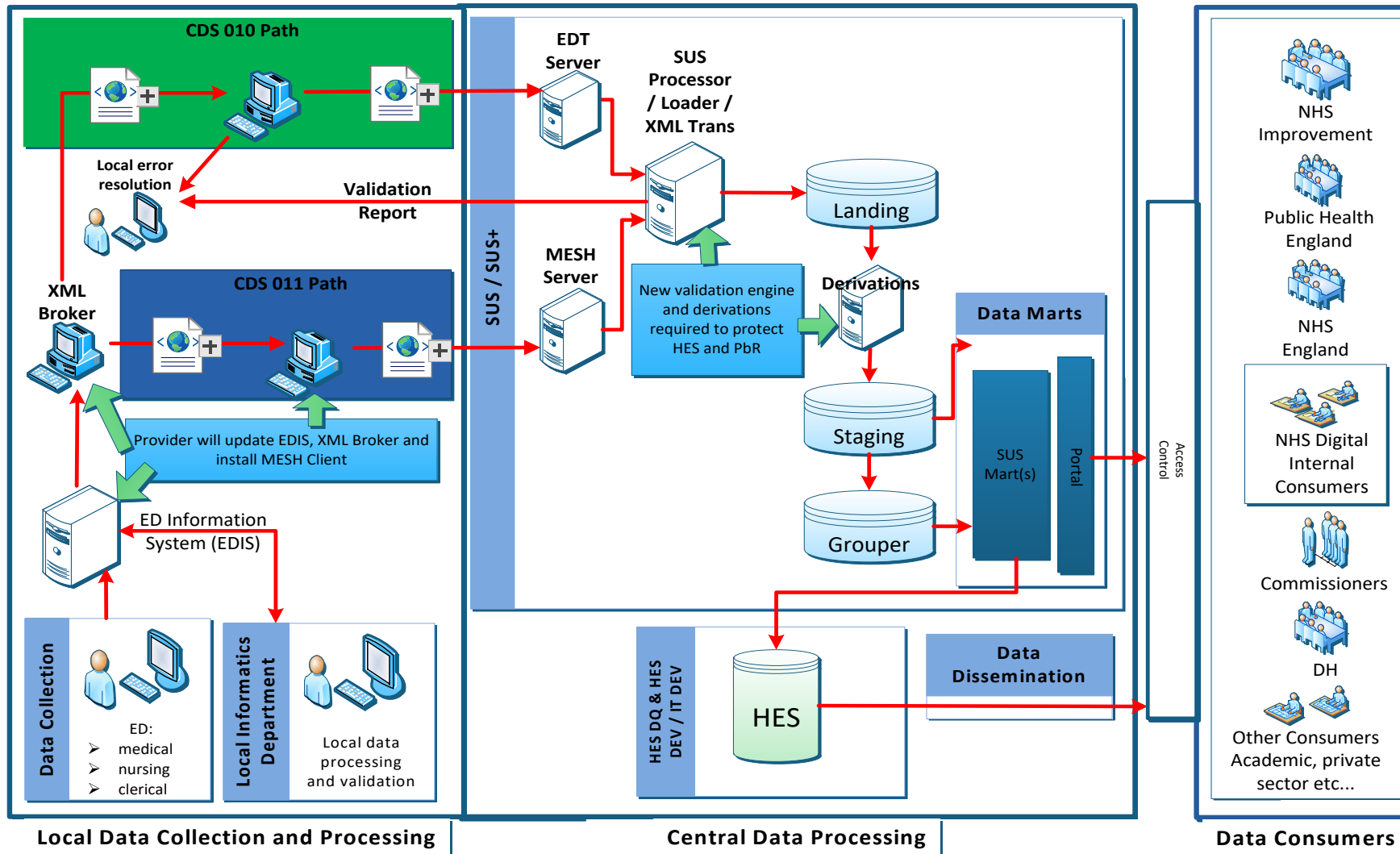
Access to the Spine and SUS is via a connection to Health and Social Care Network (HSCN), the secure private national network for the NHS.

¹⁵ <https://digital.nhs.uk/services/message-exchange-for-social-care-and-health-mesh>

¹⁶ <https://digital.nhs.uk/services/secondary-uses-service-sus>

5.5.1 CDS 6.2 and CDS v6.2.2 XML schema flow

Figure 2: The data flow for submitting both CDS Type 010 A&E in addition to the CDS v6.2.2 Type 011 - ECDS flow



5.5.2 CDS v6.2.2 XML Schema

The CDS v6.2.2 XML schema (which will have the version number 6.2.2) will be published to coincide with the publication of the standard via the Terminology Reference data Update Distribution (TRUD) Service¹⁷. TRUD provides a mechanism for the distribution of reference data to interested parties.

5.5.3 CDS 6.2 and CDS v6.2.2 XML Schema support

Upon implementation of CDS v6.2.2 support will continue to be provided by the SUS support teams via dataset.development@nhs.net

5.5.4 CDS Type 010 A&E Withdrawal

SUS will continue to support CDS Type 010 A&E submissions from those providers currently doing so until its withdrawal on 31st March 2019.

The current CDS Type 010 A&E will cease to be supported from 1st April 2019, so all providers will need to pay due regard to the standard and transition to using CDS v6.2.2 Type 011 - ECDS before this time. March 2019 reconciliation / annual refresh, submitted in May 2019, will be the last type 010 submission¹⁸.

5.5.5 XML/ Middleware Suppliers

All XML / Middleware suppliers are required to complete appropriate assurance for submission of CDS v6.2.2 XML schema. Information on this assurance approach will be provided by NHS Digital.

All XML / Middleware suppliers will be required to submit the CDS Type 011 ECDS XML schema including the ECDS data to the Messaging Exchange for Social Care and Health (MESH) service (which will transmit the ECDS data to SUS+).

General guidance about MESH is available from NHS Digital¹⁹.

CDS 6.2 will continue to use the EDT client for transmission of data to SUS+ until 1st June 2019 when all CDS schemas will be sent to SUS+ using MESH.

¹⁷ <https://isd.hscic.gov.uk/trud3/user/guest/group/0/home>

¹⁸ <https://digital.nhs.uk/services/secondary-uses-service-sus/payment-by-results-guidance>

¹⁹ <https://digital.nhs.uk/services/message-exchange-for-social-care-and-health-mesh>