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Emergency Care Data Set: CDS Version 6.2.2 Type 011

Implementation Guide

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

See Requirements Specification¹.

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¹ <https://digital.nhs.uk/isce/publication/dcb0092-2062>

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1 Introduction

This document describes how to implement the Emergency Care Data Set: CDS Version 6.2.2 Type 011.

The Emergency Care Data Set (ECDS) will be collected from Type 1, 2, 3 and 4 Emergency Departments.

This document must be read by providers of NHS Funded Care (including Trusts and Independent Sector Providers) who are either new or an existing user of the data set.

It should also be read by the following audiences, who are both new and existing users of the data set:

- Suppliers of secondary care systems, including Patient Administration Systems (PAS), Clinical Care Records systems and other operational systems specifically related to Accident and Emergency.
- CDS XML/middleware suppliers
- Other organisations that use the CDS Information Standard

Please note that examples of how information may be captured contained throughout this document are for illustrative purposes only and may differ to the specific process within your organisation.

Providers, suppliers and interested stakeholders must/should read this document (as described above) in conjunction with other available guidance. New users should comply with the full set of requirements (Requirements Specification). Existing users should implement the revisions made within this release (Change Specification).

All users must be aware of the daily submission requirement and associated data quality expectations and submission timetable (Requirements Specification) and how to approach, requirement considerations and achieve implementation (this document). Technical and User guidance is available from NHS Digital² to guide the implementation further. This document includes key considerations for both new and existing users, such as regarding information governance and possible impact of related data sets and local flows.

All users must clearly understand the need for daily submissions, to a defined level of data quality, using type 011 submission methodology. It is also essential that the difference is understood between the DCB published Technical Output Specification (TOS) and the NHS Digital issued Enhanced Technical Output Specification (E TOS), further details on which are included in the table on page 6.

The table on page 6 describes how the various available documents may be used by different users.

² <https://digital.nhs.uk/data-and-information/data-collections-and-data-sets/data-sets/emergency-care-data-set-ecds>

Existing user, who has previously submitted ECDS	New user, who has not previously submitted ECDS
Published by DCB ³	
Information Standards Notice (ISN)	Information Standards Notice (ISN)
Requirements specification	Requirement specification
Change specification	<i>Not applicable</i>
Implementation guide – This document	Implementation guide – This document
Technical output specification (TOS)	Technical output specification (TOS)
NHS Data Model and Dictionary Change Request	NHS Data Model and Dictionary Change Request
XML Schema	XML Schema
Both existing and new users of ECDS	
Published by NHS Digital ⁴	
<p>Includes:</p> <ul style="list-style-type: none"> • ECDS Technical Guidance • Enhanced Technical Output Specification (E TOS) • ECDS User Guidance • Guidance for clinical and administration staff <p>Note: As part of this release SNOMED CT concepts are no longer included in the TOS. A full list of SNOMED concepts is also included in the separately published 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 biannual SNOMED CT release (April and October).</p> <p>The diagram on page 7 further explains the difference between the TOS and E TOS.</p>	

³ <https://digital.nhs.uk/isce/publication/dcb0092-2062>

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

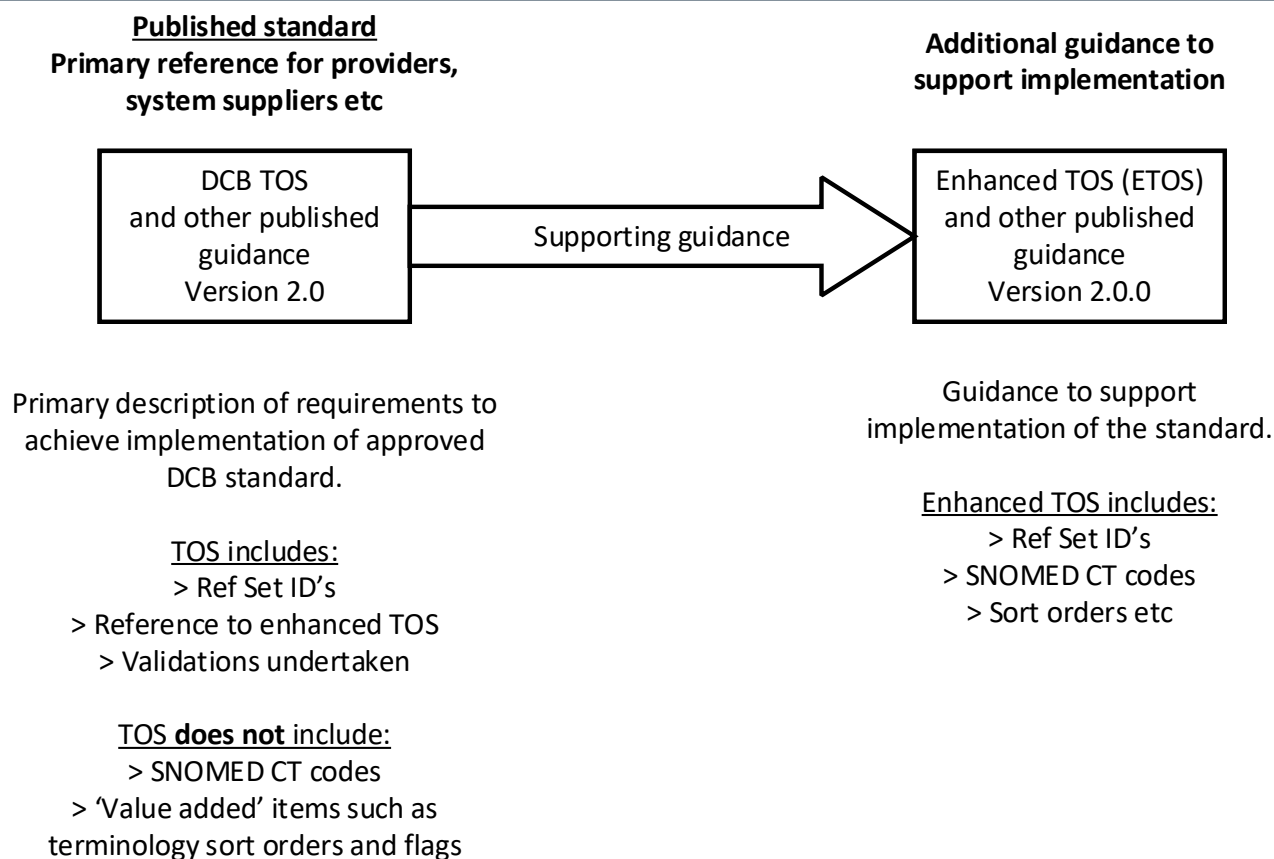


Figure 1: Explanation of difference between the TOS and E TOS.

The changes described in the Change Specification have been developed by Royal College of Emergency Medicine, Department of Health and Social Care, NHS England and NHS Digital.

There are no known commercial licensing or Intellectual Property Rights issues relating to the use of this standard within the NHS.

2 Implementation process

Below are steps which should/must be considered when implementing the standard, depending on level of experience/understanding.

2.1 Existing users

Step 1: Read the change request

This provides a summary of the changes to the dataset, schema and timescales for delivery.

Step 2: Read the requirement specification, technical output specification, implementation guide and other available guidance

These documents provide details of what needs to be done, in what way, to what timetable. The documents also describe key considerations regarding the specifics of the data set and achieving the required implementation.

Step 3: Discuss with stakeholders

It is essential to engage with all those involved in the recording, checking, submitting and using data in or for your organisation (including commissioners). This includes system supplier actions. Outcome of discussions should be fully considered during the implementation planning process.

Step 4: Plan how you will implement and test compliance

Review the actions required, plan implementation requirements and undertake testing to ensure compliance to allow daily submission of type 011 ECDS from 1st April 2019.

Step 5: Prepare for XML submission

Ensure process and system are aligned with submission using ECDS schema v6.2.2. Middleware supplier development timescales may need to be considered.

Step 6: Check and review state of readiness

Ensure systems and processes are aligned to allow submissions, in required manner, to required timescales.

Step 7: Speak to NHS Digital as required to resolve any uncertainties**Step 8: Commence daily submissions by 1st April 2019.****Step 9: Review process and resolve any issues identified**

2.2 New users

Step 1: Establish a project team tasked with the implementation**Step 2: Project team read the requirement specification, technical output specification, implementation guide and other available guidance**

These documents provide details of what needs to be done, in what way, to what timetable. The documents also describe key considerations regarding the specifics of the data set and achieving the required implementation.

Step 3: Discuss with stakeholders

It is essential to engage with all those involved in the recording, checking, submitting and using data in or for your organisation (including commissioners). This includes addressing local training requirements and system supplier actions.

Step 4: Plan how you will implement, undertake training and test compliance

Review the actions required, plan implementation requirements and undertake testing to ensure compliance to allow daily submission of type 011 ECDS from 1st April 2019.

Step 5: Prepare for XML submission

Ensure process and system are aligned with submission using ECDS schema v6.2.2. Middleware supplier development timescales may need to be considered.

Step 6: Check and review state of readiness

Ensure systems and processes are aligned to allow submissions, in required manner, to required timescales. Check required staff competencies exist.

Step 7: Speak to NHS Digital as required to resolve any uncertainties

Step 8: Commence daily submissions by 1st April 2019.

Step 9: Review process and resolve any issues identified

3 Implementation Guidance

3.1 When should this information be collected?

This information should be captured locally during each Emergency Department attendance, in 'real time' and captured electronically by clinicians and administrative staff working in the Emergency Department.

Information should be captured by clinicians and administrative staff at the relevant points within the Care Pathway. For Accident and Emergency this will initiate upon arrival at the emergency department.

3.2 Who does this change apply to?

Both new and existing ECDS users must undertake the implementation.

3.3 Who should capture the information?

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 continue to support CDS v6.2 and will develop tools and/or services to capture and 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.

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 licensed from XML/Middleware Suppliers. This will include ensuring completeness and addressing any data quality issues identified with the information within the data set.

3.4 How often should this information be updated?

The information should be updated following activity, events or changes in status as well as at other key points within the care pathway.

This information should be submitted nationally, on a daily basis. It is recommended that daily submissions are automated.

3.5 Changes to Working Practices/ Business Processes

Use of CDS v6.2.2 Type 011 - ECDS may require new, or changes to existing, business processes and/ or working practices, such as who captures data, when and how it is recorded.

This may include new, or changes to, existing, local guidance and data recording forms, and may require some degree of training for users.

3.6 Information Governance

A Direction⁵ supports the legal flow of the CDS v6.2.2 Type 011 - ECDS. The Direction does not cover the entire CDS v6.2 as this will remain subject to the section 251 approval. Additional detail regarding other requirements, including consent issues are included in the Requirements Specification⁶.

3.7 Objection Handling

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 nor published outside of NHS Digital, for purposes other than direct care, then the patient can register to opt-out of data sharing⁷.

Additional details on Information Governance is included in the ECDS Requirements Specification, section 4.4.

⁵ <https://digital.nhs.uk/about-nhs-digital/corporate-information-and-documents/directions-and-data-provision-notice/nhs-england-directions/establishment-of-information-systems-for-nhs-services-emergency-care-data-set-collection-directions-2017>

⁶ <https://digital.nhs.uk/isce/publication/dcb0092-2062>

⁷ <https://digital.nhs.uk/about-nhs-digital/our-work/keeping-patient-data-safe/how-we-look-after-your-health-and-care-information/your-information-choices/opting-out-of-sharing-your-confidential-patient-information>

3.8 Service Management

All queries relating to the implementation, submission or ongoing support of the data set should be sent to: dataset.development@nhs.net

If it is a SUS+ related query the SUS Team will respond.

If it is a specific ECDS Information Standard question the ECDS team will respond.

Guidance in relation to SUS is available from NHS Digital⁸.

4.0 ECDS Submission

4.1 Overview

All providers of type 1, 2, 3 or 4 Accident and Emergency Department Types **MUST** submit CDS v6.2.2 Type 011 – ECDS to SUS+ on a daily basis, using MESH. Changes contained within this release **MUST** be implemented, such as to allow collection and extraction in the required manner, from 1st April 2019.

Note: The version 1.0 of this standard mandated the following:

- 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.

4.2 Key Principles

Outlined below are the key principles supporting the submission frequency of ECDS.

1. Overview

- The daily feed will go into SUS+ using an XML file submitted using MESH. The definition of daily submission is described in an NHS Digital issued ECDS Conformance Criteria document⁹.

2. Frequency and Timeliness

- Daily in the context of ECDS also means timely, as there is less value in sending data that is not recent data too.
- Data quality requirements are described in the NHS Digital Conformance Criteria document⁹.

3. Data Quality

- Processes are in place to assess data quality. Reports are issued routinely¹⁰ which include an assessment of data quality. These, together with other feedback received as part of the submission process, should be used to improve submissions.

⁸ <https://digital.nhs.uk/services/secondary-uses-service-sus>

⁹ <https://digital.nhs.uk/data-and-information/data-collections-and-data-sets/data-sets/emergency-care-data-set-ecds>

¹⁰ <https://digital.nhs.uk/data-and-information/publications/statistical/hospital-episode-statistics-for-admitted-patient-care-outpatient-and-accident-and-emergency-data>

- Providers may submit data multiple times to allow for it to improve as time goes on and corrections to be made to historical episodes if necessary.
 - Providers may use a range of methods to increase data quality, for example using the NET and BULK protocols as required.
4. Use of NET and BULK protocol
- Providers may use a mixture of NET and BULK to achieve their objective of keeping SUS+ in synch with local activity.
 - Providers that use the BULK Protocol must not send in excessively large files to protect SUS+ as this will monopolise bandwidth for other users. Further detail will be provided by SUS+ during operation of the service and in the ECDS Technical User Guidance⁹.
 - Providers that use the NET Protocol are not restricted in terms of file size and frequency other than the normal SUS+ / MESH limits.
5. Automation
- Daily feeds should become fully automated from Providers, with the expectation that there is no or minimal requirement for human interaction.
 - Trusts should work with their XML supplier to implement an automated daily, rolling ECDS submission to be received by SUS+ as specified above.
6. Validation
- A validation routine is applied to submissions.
 - Conformance with the CDS v6.2.2 Type 011 - ECDS, will be enforced through the CDS v6.2.2 XML schema.
 - Validation upon landing within SUS+ will ensure the correct use of associated SNOMED CT code sets and other validation rules (as described in the E TOS). Upon translation any interchanges containing records that do not conform to the XML schema may be rejected. In these cases, a validation extract / report will be available to assist the sender in the identification and resolution of issues.

4.3 Use of SNOMED CT in the ECDS

As part of this release (Amd 34/2018) 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](#)^{Error! Bookmark not defined.}.

4.4 Capturing Diagnosis

CDS Type 011 – ECDS utilises the recording of diagnosis paired with a qualifier. The diagnosis and associated qualifier require some special consideration due to their importance in relation to clinical safety.

The submission of diagnosis using the ECDS is done via the following three data items:

1. EMERGENCY CARE DIAGNOSIS (SNOMED CT)
2. CODED CLINICAL ENTRY SEQUENCE NUMBER
3. EMERGENCY CARE DIAGNOSIS QUALIFIER (SNOMED CT)

CDS Type 011 – ECDS introduced a subset of SNOMED CT terms to capture diagnosis which has been developed and refined by emergency departments across England.

The range of SNOMED terms in the ECDS diagnostic code set has been intentionally restricted at the time of release rather than giving the user the full range of SNOMED CT terms.

SNOMED updates are presented on TRUD¹¹ and in the E TOS¹² following October and April releases.

4.4.1 Submission of Diagnosis Codes

Each diagnosis will be recorded by the treating clinician. It is recognised that no diagnosis list could capture **every** condition that might present to the Emergency Department, as in two use cases:

- very rare conditions could occur e.g. pseudopseudohypoparathyroidism or
- new diagnostic entities may evolve e.g. Zika virus.

The diagnosis should be submitted according to the following protocol:

1. The clinician should search for the most appropriate diagnosis as represented in the approved CDS Type 011 – ECDS diagnosis code set.
2. In 99.9% of patients, a diagnosis from the ECDS diagnosis subset will be the only diagnosis that a clinician will need to record.
3. The diagnosis that is submitted to SUS+ via CDS Type 011 – ECDS **must** always be one from the ECDS diagnostic code set.
4. If a more detailed diagnosis is required and **is not** in the approved CDS Type 011 – ECDS diagnostic code set, the clinician should select a diagnosis that is the closest match (e.g. Endocrine condition (disorder) in the case of pseudopseudohypoparathyroidism) to that required **and** record the more detailed diagnosis in the patient local health record.
5. If a clinician makes a more detailed diagnosis that is **not** contained in the approved CDS Type 011 – ECDS diagnostic code set, then this diagnosis **must** be communicated in the transfer of care documentation e.g. in the GP discharge letter.
6. If for any reason a diagnosis has been selected **outside** of the CDS Type 011 – ECDS approved diagnosis code set and submitted as part of CDS Type 011, the diagnosis will not be visible in the SUS+ platform except to the submitter and will not be made available to secondary users of the data (such as commissioners or researchers). Any data quality (DQ) reports provided by NHS Digital will report this as a DQ error and the provider will be notified that the data item is not in CDS Type 011 – ECDS range. In this case, the clinician **must** inform NHS Digital that the diagnosis is missing from the CDS Type 011 – ECDS diagnostic code set by emailing dataset.development@nhs.net. This will help in maintaining the code set to keep it in line with current practice.
7. In the event of new diagnosis categories that are needed before the SNOMED subset can be updated e.g. in a pandemic, then guidance may be issued to use the ‘research’ field (DISEASE OUTBREAK NOTIFICATION) to record relevant information.

4.4.2 Diagnosis Qualifier

The diagnosis qualifier is an integral element of ECDS that enables clinicians to capture the ‘uncertainty’ of diagnosis. In CDS Type 011 – ECDS the qualifiers in use are ‘Suspected’ and ‘Confirmed Present’.

¹¹ <https://isd.digital.nhs.uk/trud3/user/guest/group/0/home>

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

These SNOMED CT terms provide a solution to pathological uncertainty. In the context of the ECDS 'uncertainty' is defined as:

- **Pathologic uncertainty** – i.e. “this person who attended today has suspected gout” and;
- **Pathologic certainty** – i.e. “this person who attended today has confirmed gout”,

BUT NOT;

- **Diagnostic uncertainty** – i.e. “this person’s confirmed gout is the suspected reason they attended”.

Guidance regarding the onward transmission of the diagnosis and qualifier as part of the ED to GP Discharge Summary has been developed in partnership with the RCGP (Royal College of General Practitioners) and the PRSB (Professional Record Standards Body), please see below:

a) Where there is no 'confirmed present' diagnosis then:

- The chief complaint (a symptom) is used to populate the diagnosis entry 'diagnosis' data item, e.g. 'Shortness of breath'.
- The 'suspected' diagnosis is converted into a text entry and this is used to populate the diagnosis entry 'comment' data item. e.g. 'Suspected diagnosis: pulmonary embolus'.

This format allows the information about any 'suspected' diagnosis to be clearly and unambiguously presented to the receiving GP user. Furthermore, the combination of symptom plus text comment may then be easily incorporated into the GP record. As a result, the example provided above would appear as 'Shortness of breath', coupled with the extra information from the diagnosis comment box: 'Suspected diagnosis: pulmonary embolus'. This requirement is safe and workable and:

- Complies with the [Professional Records Standards Body \(PRSB\) / Academy of Medical Royal Colleges \(AoMRC\)](#) standards for capturing diagnoses in the clinical record.
- Requires no alteration to the arrangements already agreed and trialled for ECDS handling of diagnosis.

This requirement requires robust measures to ensure that every diagnosis is accompanied by the correct qualifier and processing to ensure that the ED to GP discharge summary message is populated as described.

- b) This guidance must also be followed for any other kinds of transfer of care communication when the diagnosis qualifier SNOMED CT concept cannot be guaranteed to be transmitted, received and presented to the user accurately.
- c) When the data has crossed the boundary from primary (direct care of the patient) uses to secondary uses then it must not pass back again to be used for primary uses.

4.5 Maintenance of ECDS SNOMED CT Subsets

From time to time the ECDS SNOMED CT subsets may be required to change to reflect the needs of the data set, clinical practice and for other reasons. Releases occur in April and October each year. The move, as part of this release, of removing SNOMED CT from the

TOS and instead locating it in the E TOS caters for regular updates without the need for the DCB standard to be reissued.

- The ECDS data items can be found within the ECDS TOS¹³.
- The ECDS data items plus SNOMED CT codes can be found in the ECDS E TOS¹⁴.
 - The ECDS SNOMED CT Subsets are downloadable with the SNOMED CT release files from TRUD¹⁵. Subset metadata is hosted on the Data Dictionary for Care (DD4C) site¹⁶. There you can select subset metadata in the search options and enter the subset name, relevant terms or subset id. Each subset has a page with information such as the use, description, and an external links to browsers where you can view the SNOMED CT codes that make up the subset membership.
- Implementation of the data items can be found within the ECDS User Guidance¹⁴.
- If a clinician finds a clinical situation that requires a new SNOMED CT code, please send a description to dataset.development@nhs.net Any new additions / updates or removals to the ECDS SNOMED CT Subsets will be available via the existing SNOMED CT maintenance and release schedules and must be implemented in line with published schedules.

4.5.1 Further Resources for SNOMED CT

More information about SNOMED CT can be found on the NHS Digital Terminology and Classifications [website](#)¹⁷, including information about:

- **Licensing:** Whilst the principle is to issue royalty-free licences for the use of SNOMED CT throughout IHTSDO Member Territories, there are commercial licensing issues in respect of SNOMED CT. Users of SNOMED CT need to obtain licences for its use. Please Note: a new licence for SNOMED CT came into effect on 1st April 2015.
- **Training:** A range of ways exist for individuals to learn more about SNOMED CT and its uses. For those who feel they need more understanding of SNOMED CT, NHS Digital provide a number of training and education resources.

4.6 CDS v6.2.2 Type 011 - ECDS Data Elements

Full details of all CDS Type 011 Data Elements are available within the ECDS TOS¹³ and the CDS v6.2.2 XML schema including all headers and trailers is available from NHS Digital¹⁸.

The ECDS TOS outlines all the data items for inclusion within CDS v6.2.2 Type 011 - ECDS.

4.7 Grouping Codes and Sorting – Usability

In order that data supplied to user bodies such as NHS England and Department of Health and Social Care (DHSC) is reliable and useful, data must be collected accurately. This requires a good quality Emergency Department Information System (EDIS) to be available to the clinical and non-clinical staff that are required to enter this data.

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>

¹⁵ <https://isd.hscic.gov.uk/trud3/user/guest/group/0/pack/26>

¹⁶ <https://dd4c.digital.nhs.uk/dd4c/publisheddatasets/1?size=10>

¹⁷ <https://digital.nhs.uk/services/terminology-and-classifications>

¹⁸ <https://isd.digital.nhs.uk/trud3/user/guest/group/0/home>

To support suppliers to develop systems which are logical and simple to use, CDS v6.2.2 Type 011 - ECDS has been developed with usability in mind. The code sets (within E TOS) have been ordered to reflect the most common/ most used terms and have also been grouped to enable the development of linked drop-down lists where possible.

Further guidance regarding how to express the CDS v6.2.2 Type 011 - ECDS code sets can be found within the ECDS User Guidance¹⁹.

4.8 Mapping to CDS Type 011 - ECDS

Some data items will require providers to map/align information used locally, e.g. staff grades and roles to ECDS code sets. The table below outlines the main areas for consideration locally, with details of the mapping being available from the ECDS User Guidance.

ECDS Data Group	Data item	Mapping Required To	Change
AMBULANCE DETAILS	ORGANISATION CODE (CONVEYING AMBULANCE TRUST)	Ambulance Organisation Data Service (ODS) codes	No change to current practice, although needs to reflect new Organisation code guidelines
ATTENDANCE OCCURRENCE ACTIVITY CHARACTERISTICS	ORGANISATION SITE IDENTIFIER (EMERGENCY CARE ATTENDANCE SOURCE)	ODS codes of organisations a patient may have been transferred from for ED care	No change within this release.
ATTENDANCE OCCURRENCE ACTIVITY CHARACTERISTICS	EMERGENCY CARE ACUITY (SNOMED CT)	Triage score in use locally (or other assessment measure) needs mapping to 5 or 3 way acuity score	No change within this release.
ATTENDANCE OCCURRENCE ACTIVITY CHARACTERISTICS	EMERGENCY CARE CHIEF COMPLAINT (SNOMED CT)	May need mapping to ICD-10 or other depending on how plan to implement SNOMED CT	No change within this release.
SERVICE AGREEMENT DETAILS	ORGANISATION IDENTIFIER (CODE OF PROVIDER)	Provider ODS codes	No change to current practice, although needs to reflect new Organisation code guidelines
SERVICE AGREEMENT DETAILS	ORGANISATION IDENTIFIER (CODE OF COMMISSIONER)	Commissioner ODS codes	No change to current practice, although needs to reflect new Organisation code guidelines
CARE PROFESSIONALS (EMERGENCY CARE)	PROFESSIONAL REGISTRATION ISSUER CODE	Professional Registration information in clinician records e.g. GMC, NMC, HCPC	No change to current practice

¹⁹ <https://digital.nhs.uk/data-and-information/data-collections-and-data-sets/data-sets/emergency-care-data-set-ecds>

CARE PROFESSIONALS (EMERGENCY CARE)	CARE PROFESSIONAL TIER (EMERGENCY CARE)	Need mapping to clinician records.	No change within this release.
EMERGENCY CARE DIAGNOSIS (SNOMED CT)	EMERGENCY CARE DIAGNOSIS QUALIFIER (SNOMED CT)	May need mapping to ICD-10 or other depending on how plan to implement SNOMED CT	No change within this release.
DISCHARGE FROM EMERGENCY CARE	ORGANISATION SITE IDENTIFIER (DISCHARGE FROM EMERGENCY CARE)	ODS codes of services patients may be discharged to.	No change within this release.

4.9 Investigations and Treatments

The investigation and treatment codes - via Healthcare Resource Groups (HRGs) - are typically the principal drivers of payments for Emergency Departments.

Changes made to the code sets contained in ECDS version 1.0 were discussed and agreed by the Casemix National Expert Working Group, which has been working closely with the Royal College of Emergency Medicine's Informatics Committee. The changes are requested in order to retire clinically obsolete, irrelevant or confusing codes and better represent emergency department activity.

With the introduction of these changes, a specific risk was identified, relating to the possibility of changes in the number and casemix of activity-derived A&E HRGs, which could cause destabilisation to the Tariff and payment system for A&E related activity, if left unmitigated. These risks pertain to both providers and clinical commissioning groups (CCGs) in the form of potential significant changes in income for providers or expenditure for CCGs.

NHS Digital completed an assessment of the impact of the proposed changes and a range of mitigating activities has been agreed.

The recommended approach for commissioners and providers to manage the transitional period from the use of CDS Type 010 A&E and CDS v6.2.2 Type 011 - ECDS is:

- To mitigate any impact via improved coding practices, particularly important for those sites with poor coding at present.
- To provide a contractual back-stop in terms of the “counting and coding” section of the NHS Standard Contract. This provides protection for both providers and commissioners from a large decrease or increase in income or expenditure due to the implementation of the ECDS, as a result of:
 - Temporary gaps in data.
 - Changes to activity coding that result in shifts in HRG generation and hence Tariff reimbursement.
 - Other factors influencing data quality and completeness.

Commissioners are advised to have patience with providers while they make the necessary changes to implement the ECDS. Further detailed guidance is available within the ECDS User Guidance²⁰.

²⁰ <https://digital.nhs.uk/data-and-information/data-collections-and-data-sets/data-sets/emergency-care-data-set-ecds>

4.10 Impact of ECDS on other Trust Data Systems

Providers should investigate whether changes to code sets used in their Emergency Departments are likely to impact on other data collections or data sharing arrangements within their trust and agree what action should be taken to mitigate against any negative impact on these systems because of implementing the ECDS code sets.

4.11 Impact of ECDS on other flows and collections

4.11.1 Local Data Flows

Providers will need to ensure that any other local flows of data should continue during ECDS implementation. Some local processes may need to be updated to accommodate information collected following the introduction of the new CDS v6.2.2 Type 011 - ECDS. This will include any local data sharing agreements that providers may have with their Commissioners, Commissioning Support Units (CSUs) and/ or Data Services for Commissioning Offices.

4.11.2 Other CDS Submission

There should not be any impact on information submitted as part of other CDS submissions. CDS Type 010 – A&E is replaced from 31st March 2019 by CDS Type 011 - ECDS.

4.11.3 EDSSS

The Emergency Department Syndromic Surveillance System (EDSSS) monitors daily attendance information from a network of EDs across England and Northern Ireland and publishes a weekly report providing the number of attendances for specific conditions. EDSSS plays a valuable part in providing intelligence on infectious diseases (including seasonal respiratory illness), investigation of vaccine effectiveness (including influenza and rotavirus) and a wide range of incidents (including non-infectious events).

Public Health England (PHE) receives a daily feed of Emergency Department data from departments across England and Northern Ireland.

If you have any queries regarding EDSSS then please contact:
syndromic-surveillance@phe.gov.uk.

4.11.4 ISTV

The Information Sharing to Tackle Violence (ISTV) Information Standard (ISB1594 Amd 30/2012)²¹ comprises a small de-identified data set collected by Accident and Emergency (A&E) departments and shared with local Community Safety Partnerships (CSP) on a monthly basis.

The data covers all A&E attendances resulting from violent incidents, including:

- Time and date of the incident
- Time and date of arrival in A&E
- Specific location of the incident
- Primary means of assault (i.e. weapon or body part used)

²¹ http://webarchive.nationalarchives.gov.uk/+/http://www.isb.nhs.uk/documents/isb-1594/amd-31-2012/index_html

The ISTV standard is mandatory for Type 1 Emergency Departments in England and optional for all other Emergency Department types.

The ECDS initial standard introduced a number of new data items to enable the consistent collection of information relating to Emergency Department attendances as a result of an injury. These data items have been designed to capture information relating to all types of injury including violent assault.

Implementing the ECDS should not change any agreements or processes which may have been established locally to support the ISTV standard and the sharing of violent assault related information from Emergency Departments with Community Safety Partnership's (CSPs) or others local organisations. Due to the greater detail of the injury information that ECDS introduces, particularly in relation to Injury location/place type and Injury mechanism, CSPs may see a change in the data flowing to them. We will be working with ISTV colleagues and Violence Reduction Nurses to communicate these changes prior to implementation of the ECDS and where necessary will provide guidance to support implementation of the ECDS specifically in relation to the collection of injury data. Please see the ECDS User Guidance²².

The collection of information regarding all injury related Emergency Department attendances will provide greater information to support the aims of the ISTV standard, increasing the granularity and detail of the available information at local level.

Providers should work with their system suppliers and local partners to ensure that the ECDS injury information can be captured locally and that relevant information can be included in local flows to CSPs (in line with the ISTV guidance) and also to NHS Digital as part of CDS Type 011 – ECDS submission.

4.11.5 TARN

The Trauma Audit and Research Network (TARN) is an established national clinical audit for trauma care across England, Wales and the Republic of Ireland and has been supporting trauma receiving trusts for over twenty years by providing each hospital with case mix adjusted outcome analysis, performance of key process measures and comparisons of trauma care.

The TARN Information Standard ISB 1606²³ was published in September 2014. Further information regarding the TARN Standard Data Set Specification²⁴ is also available, and also via the Trauma Audit and Research Network website²⁵.

The TARN standard collects very detailed patient level clinical and process data for the audit of major trauma. The data collected represents small numbers of high acuity, high complexity patients and is largely collected retrospectively from multiple sources e.g. radiology, autopsy and operation reports.

The ECDS has been developed wherever possible to collect data items in a format that corresponds to the TARN data points. For the process data points (time of arrival in ED, time of exit from ED) these follow the data modelling and dictionary standards, so will be consistent in CDS Type 011 – ECDS.

²² <https://digital.nhs.uk/data-and-information/data-collections-and-data-sets/data-sets/emergency-care-data-set-ecds>

²³ <http://webarchive.nationalarchives.gov.uk/+/http://www.isb.nhs.uk/documents/isb-1606/amd-12-2013/1606122013isn.pdf>

²⁴ <http://webarchive.nationalarchives.gov.uk/+/http://www.isb.nhs.uk/documents/isb-1606/amd-12-2013/1606122013spec.pdf>

²⁵ <https://www.tarn.ac.uk/Home.aspx>

It is not anticipated that implementation of CDS Type 011 will impact on the collection of the TARN standard. However, where SNOMED CT is proposed, specifically for the collection of diagnosis, providers should look at whether this impacts on the collection of the required TARN information.

The ECDS will continue to support the following elements of TARN:

- Better data completeness: TARN Emergency Department data is often incomplete because current IT does not routinely support capture of staffing level (e.g. time of consultant attendance) and intervention times.
- The research field in ECDS is a particularly exciting innovation for large scale major trauma research e.g. CRASH3 study²⁶ where many patients will be recruited. ECDS will have the ability to flag recruitment and will help Investigators manage large trials.
- The injury data collection will have particular benefit for the large cohort of older patients who are injured who have an Injury Severity Score (ISS)²⁷ of 9-15 as good quality data about the cause of these injuries is rarely available later, and so collection at time of initial attendance and when witnesses are present will be a significant benefit in that we may be better able to prevent these injuries.

Whilst there should be minimal impact on TARN during and following implementation of the ECDS those involved in the TARN data collection should be made aware of the implementation of CDS Type 011 – ECDS.

4.11.6 Emergency Department to GP Discharge Summary

The Professional Record Standards Body (PRSB) was commissioned by NHS Digital to develop standards for electronic Emergency Care (EC) discharge summaries. The Emergency Care Discharge Summary project objectives were to improve patient safety and continuity of care by developing information models to support the transfer of vital and accurate information to General Practice (GP) systems following an attendance at an Emergency Department.

The EC Discharge summary information models will apply to all Emergency Department types as defined by the NHS Data Dictionary.²⁸

The information models developed by the PRSB were used by NHS Digital to develop technical specifications which will then be made available to system suppliers to implement appropriate electronic solutions²⁹.

The Emergency Care Discharge Summary headings have been developed alongside the ECDS. Key clinical information required to be submitted as part of the CDS v6.2.2 Type 011 - ECDS is represented in the Emergency Care Discharge Summary model where appropriate. It is expected that information systems who have successfully implemented the ECDS will be able to generate the required data to populate Emergency Care discharge summaries according to the PRSB information models.

²⁶ <http://crash3.lshtm.ac.uk/>

²⁷ <https://www.tarn.ac.uk/Content.aspx?c=3117>

²⁸ http://www.datadictionary.nhs.uk/data_dictionary/attributes/a/acc/accident_and_emergency_department_type_de.asp

²⁹ <https://theprsb.org/standards/emergencycaredischarge/>

Providers should work with their system suppliers to implement the headings outlined in the Emergency Care Discharge Summary information models in line with the specified implementation timeframes.

4.11.7 Child Protection Information Sharing

ECDS deliberately excludes CP-IS information as there is a national standard supporting a national strategy to collect and share this information³⁰.

4.11.8 Female Genital Mutilation Risk Indication System – Local System Integration

ECDS deliberately excludes FGM-RIS information as there is national standard supporting a national strategy to collect and share this information³¹.

5.0 Technical Guidance

5.1 Providers who currently submit CDS 6.2

Providers currently submitting CDS 6.2 must continue to submit CDS 6.2 for all CDS Types. Use of CDS Type 010 – Accident and Emergency CDS ceases on 31st March 2019, before which a transition is needed to the submission of CDS Type 011 – ECDS by all in scope providers.

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

When an Emergency Department implements the ECDS it must no longer submit a CDS Type 010 – Accident and Emergency CDS for the same services, it will instead submit CDS v6.2.2 Type 011 - ECDS.

CDS Type 011 will be submitted, as with version 1.0 of the standard, via the Messaging Exchange for Social Care and Health (MESH) service³². 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. Note: From 1st June 2019 onwards all CDS type schemas will be sent to SUS+ via MESH.

5.2 Data Validation CDS v6.2.2 Type 011 - ECDS

The EDT (Electronic Data Transfer) 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, is possible.

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.

³⁰ <http://digital.nhs.uk/isce/publication/SCCI1609>

³¹ <http://digital.nhs.uk/isce/publication/SCCI2112>

³² <https://digital.nhs.uk/services/message-exchange-for-social-care-and-health-mesh>

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.

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

5.3 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.

5.4 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 form³³
2. Setting up a MESH end point certificate
3. Installing MESH as a service

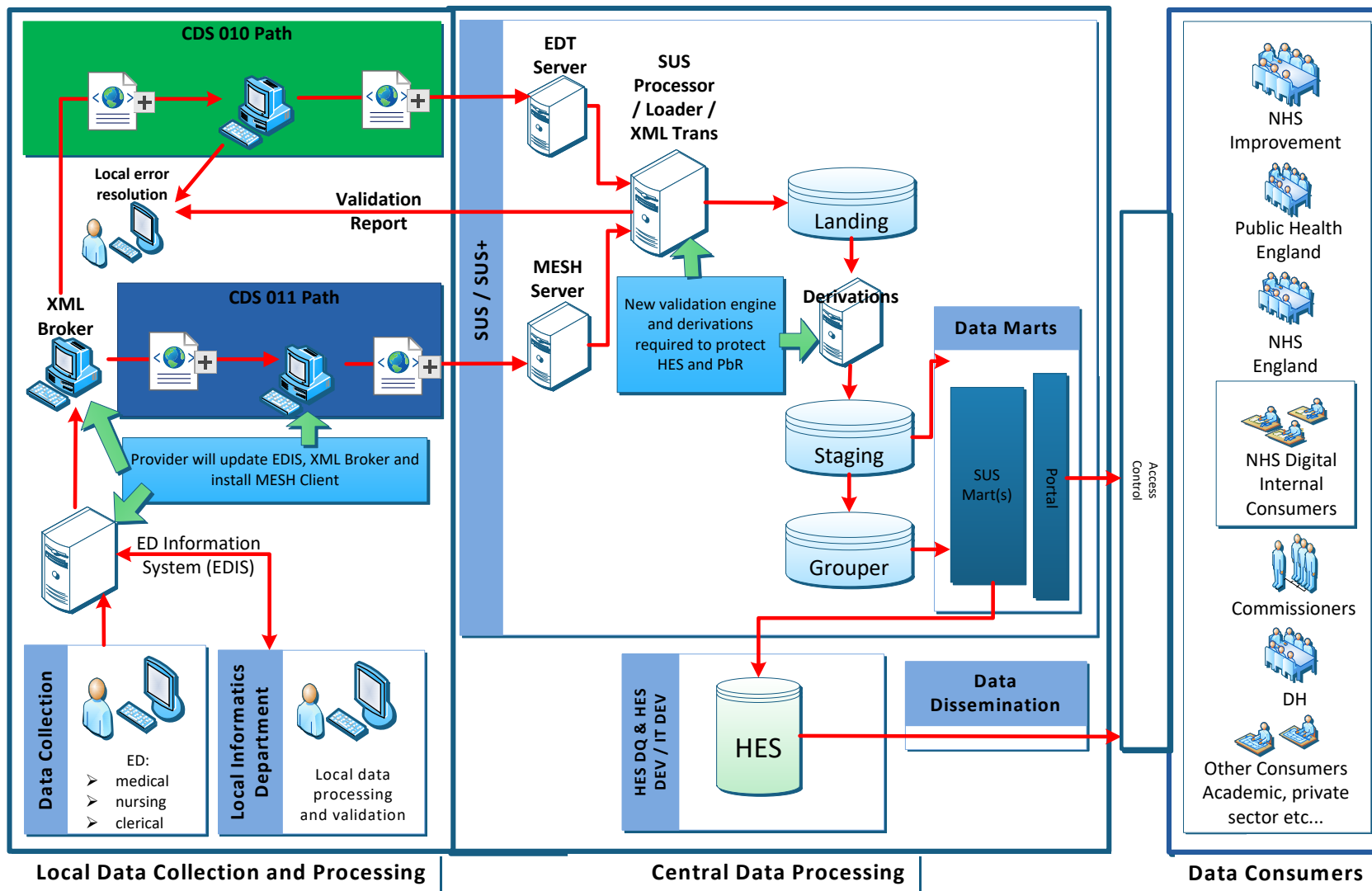
Installation guidance for MESH is available from NHS Digital³⁴.

³³ <https://digital.nhs.uk/services/message-exchange-for-social-care-and-health-mesh/message-exchange-for-social-care-and-health-mesh-application-forms>

³⁴ <https://digital.nhs.uk/messaging-exchange-social-care-health/technical-information>

5.4.1 CDS 6.2 and CDS v6.2.2 XML Schema Data Flow

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



5.4.2 CDS v6.2.2 XML Schema

The CDS v6.2.2 XML schema will be published to coincide with the publication of the standard via the Terminology Reference data Update Distribution (TRUD) Service³⁵.

TRUD provides a mechanism for the terminology license and distribution to interested parties.

5.4.3 CDS 6.2 and v6.2.2 XML Schema Support

CDS v6.2.2 support will be provided by the SUS support teams via dataset.development@nhs.net

5.4.4 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 the new CDS v6.2.2 Type 011 - ECDS before this time.

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 guidance³⁶.

5.4.5 XML / Middleware Suppliers

All XML / Middleware suppliers will be 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+).

For general guidance about MESH is available from NHS Digital³⁷.

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

Where changes take place to upgrade the existing SUS version, it is anticipated that the new CDS Type 011 ECDS will also be included within any future delivery and transition road map.

5.4.6 File Sizes

Users should note that the MESH client will support files up to a limit of 20GB compressed and 10GB uncompressed.

³⁵ <https://isd.hscic.gov.uk/trud3/user/guest/group/0/home>

³⁶ <https://digital.nhs.uk/services/secondary-uses-service-sus/payment-by-results-guidance>

³⁷ <https://digital.nhs.uk/messaging-exchange-social-care-health>

It is unlikely that the introduction of CDS v6.2.2 Type 011 - ECDS will result in increased file sizes that exceed the maximum permitted size for submission to MESH or SUS+. Where maximum permitted file size is exceeded providers are recommended to split their submission into multiple files or by reducing the period of activity included within the submission.

5.4.7 Changes for Providers

There are likely to be changes to the following arising from local implementation of changes to introduce the new CDS v6.2.2 Type 011 - ECDS. The change needed will be determined by local circumstance.

Local Systems (e.g. Patient Administration, Care Record Systems & Clinical Systems)

One or more of the following local systems may need changing to include:

- Addition of new data elements to systems to support local electronic data collection
- Removal of old data elements
- Modifications to existing data elements
- Changes to system configuration to allow information to be updated once and then correctly assigned onto individual CDS records
- Changes to extract routines to ensure new data elements can be extracted in a way conducive to inclusion with a CDS submission, including those already captured within the system
- Changes to enable an automated feed of CDS Type 011 on a daily basis
- To support the new code sets, local systems will need to support SNOMED CT output to NHS Digital. SNOMED CT front-end collection is not mandatory although code sets should be accurately represented and translated to SNOMED CT before transmission to NHS Digital
- There may be a need to perform local mapping of values to support local grouping.

Local Data Warehouses

Increasingly, providers use a data warehouse as the basis for generating CDS submissions to allow the linkage of required information from disparate systems.

There are some changes expected to the structure of local data warehouses and extraction routines in order to support CDS v6.2.2 Type 011 - ECDS. Again, one of the main changes will be to support the daily flow of CDS v6.2.2 Type 011 - ECDS.

Business Processes

In some cases, changes introduced as a result of the CDS v6.2.2 Type 011 - ECDS may require new, or changes to existing, business processes.

This may include new, or changes to existing, local guidance and data recording forms, and may require some degree of training for users.

Change for CDS Users

Users of CDS data such as commissioners, public health observatories and commercial organisations will need to make appropriate changes to systems to support the new data outlined within CDS v6.2.2 Type 011 - ECDS.

6.0 Timescales

See Requirement Specification³⁸

7.0 Additional Sources of Information

- **Data Coordination Board (DCB):**
For information relating to the introduction of the new CDS v6.2.2 Type 011 - ECDS, including change specification, requirements specification and standard.
<https://digital.nhs.uk/isce/publication/dcb0092-2062>
- **NHS Data Model and Dictionary Service:**
For information relating to the NHS Data Dictionary including CDS 6.2 data elements, attributes, business definitions, supporting information and CDS 6.2 XML schemas.
<http://www.datadictionary.nhs.uk/>
- **NHS Digital:**
For enquiries relating to the CDS v6.2.2 Type 011 - ECDS standard.
dataset.development@nhs.net
- **Secondary Uses Services (SUS):**
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.
<https://digital.nhs.uk/services/secondary-uses-service-sus>
- **Messaging Exchange for Social Care and Health:**
The Messaging Exchange for Social Care and Health (MESH) is the main messaging service used across health and social care.
<https://digital.nhs.uk/messaging-exchange-social-care-health>
- **Hospital Episode Statistics:**
HES is a data warehouse containing details of all admissions, outpatient appointments and A&E attendances at NHS hospitals in England.
<http://digital.nhs.uk/hes>
- **Organisation Data Service (ODS):**
The Organisation Data Service (ODS) is responsible for publishing organisation and practitioner codes, along with related national policies and standards.
<https://digital.nhs.uk/organisation-data-service>
- **National Casemix Service:**
The National Casemix Office designs and refines classifications that are used by the NHS in England to describe healthcare activity.
<http://digital.nhs.uk/casemix>

³⁸ <https://digital.nhs.uk/isce/publication/dcb0092-2062>