



**Professional
Record
Standards
Body**

**Better records
for better care**

AMBULANCE HANDOVER TO EMERGENCY DEPARTMENT

IMPLEMENTATION GUIDANCE

August 2019

Acknowledgements

The Professional Record Standards Body

The independent Professional Record Standards Body (PRSB) was registered as a community interest company in May 2013 to oversee the further development and sustainability of professional record standards. Its stated purpose in its Articles of Association is: “to ensure that the requirements of those who provide and receive care can be fully expressed in the structure and content of health and social care records”. Establishment of the PRSB was recommended in a Department of Health Information Directorate working group report in 2012.

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Reviewers

This document must be reviewed by the following people: [author to indicate reviewers](#)

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Name	Signature	Title	Date	Version
PRSB Assurance Committee			24.9.19	0.11
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Glossary of Terms

Term / Abbreviation	What it stands for
ADRT	Advance decision to refuse treatment
ADS	Ambulance DataSet
ASHICE	ASHICE is mnemonic acronym used by emergency medical services to pass the important details of a patient over to a receiving hospital, or other definitive care provider.
ATMIST	Mnemonic acronym for: Age Time Mechanism of injury , Symptoms, Treatment
CoP	College of Paramedics
CPR	Cardio pulmonary resuscitation
ECDS	Emergency Care Dataset
ED	Emergency Department
dm+d	NHS Dictionary of Medicines and Devices
NEWS2	National Early Warning Score (version 2)
Refset	Reference set of SNOMED CT codes
RCEM	Royal College of Emergency Medicine
PDS	Personal Demographics Service
PRSB	Professional Record Standard Body

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1 Introduction

1.1 Introduction and background

In 2016, the Professional Record Standard Body (PRSB) was commissioned by NHS Digital to develop standards for ambulance transfers of care to emergency departments.

The development of the Emergency Care Data Set and related work has generated new opportunities for integrating data in urgent and emergency care.

In 2018 NHS England commissioned a new project to deliver a set of national standards and national capabilities to enable the digital transfer of an ambulance report from the ambulance service to a hospital.

As part of this project, the PRSB have been requested to revise the standards for ambulance handover to emergency care. A key deliverable is that this work must be endorsed by key stakeholders including the Royal College of Emergency Medicine (RCEM) which represents the recipients of the data.

The PRSB provides professional, patient-endorsed and evidence-based clinical record standards. These provide the basis for technical specifications produced to enable industry to implement technical solutions.

The PRSB have collaborated with the Royal College of Physicians' Health Informatics Unit on this project. Clinical leadership has been provided by clinicians from the RCEM and the College of Paramedics (CoP).

The benefits of the project are expected to include:

- Increased patient safety with availability of consistent transferrable information to provide continuity of care in a more efficient workflow.
- Increased patient satisfaction through legibility and availability of information and in knowing that information will be available to them on a timely basis.
- Time savings for NHS organisations – time saved by the removal of need to develop and design content and through the introduction of more efficient workflows in the transfer of information.
- Cost savings from reduced duplication of recording.
- Increased efficiency and opportunities for improvements. Structured/coded information can be available for reuse in clinical audit and research, but can also flow to departments before patient arrival, allowing pre-arrival streaming based on clinical information.
- Increased ability to measure and improve actual patient clinical outcomes rather than process outcomes.
- Increased opportunity for future interoperability.

In addition it is expected that:

- Emergency care services will receive a consistent set of information regardless of which ambulance service conveys the patient.
- Improved quality of the information provided to emergency care services.

- Improved patient safety, e.g. emergency care professionals will know what medications have been administered in the ambulance etc. and importantly these can be imported into the hospital patient records.
- Clinical information will be shared with emergency care making them better prepared to arrange patient discharge and prevent unnecessary admissions.

1.2 Purpose

This document is intended to provide high level guidance to those implementing the revised ambulance to secondary care handover standards. It contains information relevant to both industry and clinical practice. The intended audience is broad, encompassing all involved in the design, development and implementation of IT solutions which are deploying the standards, including those developing learning resources, specifically those involved in the transfer of ambulance clinical information at the point of handover of care. The guidance was developed during the development of the standards, it is therefore not able to provide definitive guidance and it is anticipated that it will be refined in response to findings and feedback during actual implementation.

The Final Report for the **standard** provides more detail on the standard and how it was developed.

2 General Guidance

2.1 General guidance for implementation

- a) This document is designed in conjunction with the existing Emergency Care Data Set (ECDS) and the Ambulance Data Set (ADS) as being developed by NHSE/I.
- b) It is not anticipated that all headings will need to be recorded or communicated in all circumstances, only where they are relevant to a specific patient. Headings should not be included in an electronic communication (referred to in this document as a 'message') where there is no data recorded or available.
- c) The section headings are intended to support navigation around the record and are clinical groupings of related subheadings, rather than having any semantic meaning.
- d) Where there is a heading and a subheading with the same name, there is no need to display the heading as well as the subheading in a message.
- e) It is not anticipated that local systems will need to change the display of data to comply with the standards; local terms and ordering can be maintained as long as they are mapped to the information models. The order in which headings appear in a message can be agreed locally.
- f) Each record entry must have the date and time recorded and the identity and role of the person making the record. This information should be recorded in an electronic record automatically, by date and time stamping each record and associating it with the personal identification of the individual recording it.
- g) Information should be pre-populated, where appropriate, for example from the Personal Demographics Service (PDS). This will reduce the amount of data that has to be re-keyed at the point of care, and optimise the usability of the standard. The expectation is that, in time, pre-population will include supply of appropriate SNOMED CT codes, for example by using pick lists of terms from SNOMED CT.
- h) Where there are multiple clinicians/teams involved in the care of patients within the pre-hospital setting, the local system should retain an audit trail of the provenance of all contributions.
- i) Clinicians should always use professional judgment to determine what information should be communicated. Just because the system records information, does not always mean that it would be relevant to send to others. Systems should support this by enabling editing of communications by clinicians prior to them being sent.
- j) Communications should be brief, where possible, containing only pertinent information, rather than duplicating information which the recipients already have access to in their own records. The system should not require the user to key in the information if the information can be pulled from other system data fields.
- k) The extent to which information can be taken into the recipient system in structured/coded format will depend on the capabilities of the recipient system. Local decisions need to be made about what information is ingested into recipient systems in a structured coded format and what information is attached as a document. Systems should have or be implementing structured and coded recording using SNOMED CT and the NHS Dictionary of Medicines and Devices (dm+d).
- l) Recipients should be able to read all of the content (i.e. any coded data should be carried with a human readable term and any associated free text).
- m) In the recipient system, the information in the message can be displayed in any format as designed by the end user and supplier. The standards provide a common structure

to the communication, not a style guide. Different IT systems can display the same information in different ways, but the meaning should remain the same.

- n) As part of the implementation, trading agreements will need to be drawn up at a local/regional level (e.g. clinical commissioning groups [CCG]), including:
- i. Details of which optional sections will be utilised.
 - ii. Any additional information agreed to be communicated locally.
 - iii. The sequence of the sections.
 - iv. Mapping from local headings/fields to those in the standard should be done by a system supplier and clinical lead once for all instances of their system. Where the system allows local configuration the mapping should be owned by a clinician in each organisation.
 - v. Requirements for receipt of the communication and how it is imported into the receiving system.
 - vi. New work processes for producing and receiving the communication. This will require professional input from local professional leaders.

2.2 Mandatory, required and optional

- a) Within the standard all sections or headings and elements within the sections are defined as either mandatory, required or optional. This defines which sections or headings will be included in the handover a message, and which elements are included in each section.
- b) MANDATORY sections must always be included. Mandatory elements must always be included if the section is included in the message. If there is no information, there will be an option such as “no information available” or “not known”. A required or optional section can have a mandatory element. This does not make the section mandatory, but means that if that section is included in the message, then the mandatory element must be included. For example, if medications is included (required section), then the medication name (mandatory element) must be included, however if no medications were administered then the medications section does not need to be sent.
- c) Required sections must be included where there is information available to communicate in the handover.
- d) Optional sections allow for a local decision as to whether information is sent to the recipient.
- e) Where there is no information recorded in a required or an optional section, that section should not be sent to the recipient to avoid the recipient having to view a communication with blank sections.
- f) If a section is marked as MANDATORY or REQUIRED it should not be ‘downgraded’ to OPTIONAL by local agreement. However, in some circumstances by local agreement headings can be ‘upgraded’ from OPTIONAL to either REQUIRED or MANDATORY. However, any decisions should be made as part of a trading agreement between the parties involved.
- g) All sections in the standards must be supported by IT systems, i.e., it should be possible to record and communicate information in all sections. However, there should be flexibility as to which of the optional sections are included in local implementations. This means that all the sections should be available for local

organisations to use, but there should be flexibility to allow local choice about which of the optional headings to use.

2.3 Coding

The Personalised Health and Care 2020 framework for action recommends the use of SNOMED CT and the dictionary of medicines and devices (dm+d). Please note:

- The ambition is for SNOMED CT and dm+d to be the only clinical coding schemes in use in the NHS by 2020.
- Not all information sent in structured/coded format will be displayed in this format at the receiving end. This will be dependent on the capability of the receiving end system and will vary across organisations. However the structured coded data should be retained in the recipient system so that it can be migrated to a system that does understand the coding.
- There may be circumstances where the end user needs to be able to see the actual code rather than the text. This could be done in a variety of ways, for example, 'mouse over'.

3 Emergency Care Data Set (ECDS)

This standard is part of a wider urgent and emergency care data strategy, which addresses information requirements throughout the patient journey, including NHS111, paramedic intervention, out-of-hours services and emergency care. The aim is to share linked datasets (e.g. emergency care dataset [ECDS] and the ambulance dataset [ADS]). The ECDS is an existing information standard (DCB0092-2062) and this project has aligned with it where relevant. A separate project running in parallel, but over a much longer timescale, is developing the ADS. This PRSB project has linked with the ADS project as much as possible during the timescales of this project. Further work will be needed to ensure that the two standards remain aligned and to populate the ambulance to secondary care transfer where appropriate with value sets from the ADS.

4 Guidance on specific sections

Guidance on completion of specific sections of the standard is provided below.

4.1 Person demographics

- For the NHS number (or equivalent, e.g. CHI number in Scotland) there should be the option to record 'not known' or 'not available'. Existing national guidance should be followed, including how to handle patients without an NHS number, e.g. overseas visitors, services personnel, prisoners. The ADS will have a way of dealing with unknown or patients unable to communicate their details. Matters relating to the potential mis-identification of patients are discussed within the Hazard Log.
- Spine compliant systems are needed to obtain traced NHS numbers. Where an organisation does not have a system linked to the Personal Demographics Service,

other demographics fields will need to be used, with local person identity matching software.

- Overseas visitor status will be communicated if recorded, although it is not required for patient care, as it will save time in ED.
- System design should allow the display of separate sections for health/care contacts and personal contacts (e.g. family, friends, relatives etc) under the 'relevant contacts' heading.

4.2 GP Practice

- The 'GP practice identifier' does not need to be a displayed field. It is intended to be used to provide the GP practice details via lookup from national registers.
- Many people will not offer a named GP. Only the 'GP practice details' heading would need to be completed in these situations.
- A patient may be registered with more than one GP practice. Normally patients are registered with one practice, but may be treated as a temporary registration (e.g. whilst on holiday) by another practice. The registered GP practice can be obtained from the PDS. Suppliers should enable more than one GP practice to be recorded to accommodate temporary registration. Communications will go to the GP surgery that the patient is permanently registered with. However, sometimes a GP who is serving a patient on a temporary basis may also need to access the communication. In this instance, both GP practices should be recorded.
- If a patient is not registered with a GP practice, then the GP practice record entry should appear with the text "No known GP practice".

4.3 Legal Information

Consent for Information Sharing

This is implicit, however if the patient has capacity and does not want information to be shared between the paramedics and the ED this should be recorded and no other information should flow.

Advance Decisions to Refuse Treatment and CPR decisions

The core principle of this information standard is that the information that is transmitted must be actionable by the clinicians within the receiving department and therefore the patient safety considerations are of paramount importance.

Advanced Decision to Refuse Treatment

This will comprise a simple Yes/No of whether an advanced decision exists or not. No further information should be sent. In the future, as standards develop and there is the ability to transmit clinically and legally binding decisions in a format that cannot be tampered with, actionable information could be included.

For CPR Decisions

There is an inherent risk of transmitting data that a CPR decision has been made means that a patient will not be resuscitated, potentially inappropriately, therefore within this iteration of the standard, neither a record of a DNACPR nor RESPECT form, will be included within the transfer of care standard. Instead, it will rely on the free-text documentation within the

ambulance clinical record and the hand-over of authentic documents at patient handover. Alternatively this information can be part of an ADRT or advance statement.

Hazard 7 in the hazard log [add weblink] addresses the risk around CPR decisions and ADRT. In eliminating the risk of inappropriately not resuscitating a patient, a reverse but lesser risk of giving inappropriate CPR is accepted

4.4 Safeguarding

For safeguarding concerns:

- Record which agencies (i.e. social services, police, voluntary sector) have been sent relevant documentation with their contact details and dates e.g. adult safeguarding.
- ECDS safeguarding codes and the associated textual terms may be included in this section, together with any associated commentary. Any significant actions should be included in the plan.

4.5 Referrer Details

This is the details of the source of the referral to the ambulance service. This is the provenance of the call. If not a member of the public, it could be a clinician or a service.

4.6 Individual Requirements

Some of the information under this heading could be populated from the Spine or the Patient Demographic Service (e.g. person's language, accessible information standard), where it is recorded.

4.7 Participation in Research

This is the unique trial identifier, usually the Universal Trial Number (UTN) registered on the International Clinical Trials Registry Platform (ICTRP). This will only be for trials in the ambulance or urgent and emergency care pathway for this patient, any other trials the patient maybe involved with can be looked up by the ED department, not in the ambulance.

4.8 Incident Details

Several of the elements in the incident details section will be have information provided or pre-populated from the local ambulance systems.

Patient Unique Identifier

This is yet to be defined within the ADS which is currently in development, the exact term used is not yet decided but will allow the ability to record a unique identifiable reference for each patient involved in a single ambulance incident, including where there are multiple patients, where not identified or traced on the PDS.

Time of arrival at handover destination

If the handover message is sent before arrival then this field could either be blank or contain the estimated time of arrival (ETA), but if it is sent on or after arrival it should be the actual time of arrival.

4.9 Injury

All the elements in this injury section should be SNOMED coded using the refsets defined for ECDS.

4.10 Presenting Complaints or Issues

- The chief patient complaint as identified by the clinician should be recorded under this heading. This comprises the diagnosis on which treatment is based, together with a qualifier to identify whether this is confirmed or suspected.
- The ECDS Chief Complaint SNOMED CT subset should be used.
- Complaints and issues raised by the patient should be recorded as free text.

Acuity Assessment

- Acuity level is used by the receiving unit to determine resources necessary for patient care e.g, trauma team.
- Acuity assessment should be coded using the emergency care acuity simple reference set
- As system-wide digital maturity increases, this acuity data is expected to render the existing 'phone patch' call to the ED unnecessary, and this would be a significant benefit.

4.11 Diagnoses (Clinical Impression)

The term Clinical Impression is used because not all ambulance assessments will result in a formal (suspected or confirmed) diagnosis. Therefore this term may include both diagnoses (e.g. suspected anaphylaxis) and/ or symptoms (abdominal pain) as defined in the Ambulance Data Set.

- The diagnoses/ symptoms should be recorded in order of their relevance, with the **most serious item first**.
- For clinical safety reasons, excluded diagnoses must **not** be recorded in structured coded fields, but may be listed in the 'clinical summary'.
-
- 'Co-morbidities' should be recorded as separate diagnoses where they are newly identified.

The information should be recorded using the following hierarchy;

- i. Where there is a 'confirmed' diagnosis (e.g. 'fractured tibia') this is recorded together with the qualifier 'confirmed', using the ECDS Emergency Care Diagnosis code set (SNOMED CT) [this maybe a modified version for ambulance use].

- ii. Where there is no 'confirmed' diagnosis then the 'suspected' qualifier should be used, e.g. 'Suspected diagnosis: pulmonary embolus', using the ECDS Emergency Care Diagnosis code set (SNOMED CT)
- iii. If no diagnosis is available, the chief clinical concern should be recorded using the ECDS Emergency Care Chief Complaint code set (SNOMED CT). This recognises that the clinical concern might change through the patient journey and provides the latest information, and also accommodates ambulances not crewed by registered clinicians.

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

Ambulance DataSet (ADS) Refsets

When the ADS development is completed, the refsets used above maybe updated to ADS refsets where these are created. The ADS is designed to align with ECDS, so much of the refsets are expected to be common across ADS & ECDS.

4.12 Clinical Summary

This is the clinical assessment by the ambulance crew of the person's condition at the handover. It should be kept concise, but is where most of the free text information can be put including differential diagnosis and opinion. It may be used to communicate messages shared within the existing ASHICE/ATMIST arrangements for pre-alerts.

4.13 Treatments and Interventions

Rationale will not need to be recorded for every decision to treat - only where it is pertinent to do so. Training will need to be given to users so they are aware of when it is appropriate to record rationale.

4.14 Investigation Results

This section includes details of investigation results. It allows for results in either structured format (e.g. specific result values) or unstructured format (e.g. where the result is text or a report or other attached file).

4.15 Observations

Information standards for capturing and transmitting patient observations are not currently sufficiently detailed to ensure safe and consistent transmission of patient data in this context. Therefore, a further piece of work will be necessary to define patient observations standards and their transmission as part of a clinical records, including provenance and validation of such information.

The communication of NEWS2 may be restricted within certain age groups as determined by local governance arrangements.

4.16 Assessments

Assessments may include, eg holistic assessments such as CURB65 (pneumonia assessment), National Institutes of Health Stroke Scale (NIHSS) or interRAI (<http://www.interrai.org>). The section allows for either structured results (e.g. for National Institutes of Health Stroke Scale (NIHSS) or unstructured results (e.g. a summary of the assessment).

4.17 Risks

The risks section could potentially contain sensitive information. Therefore, sufficient role based access controls should be in place to ensure this information is only shared with those care professionals where there is a need to do so.

There may be situations where it is not advisable to share information in this section with the person to whom it relates. Appropriate policies and technical solutions need to be in place for these situations.

4.18 Allergies and Adverse Reactions

System design should ensure that both new and existing serious allergic reactions are prominently displayed so that they cannot be overlooked.

Where possible existing allergies should be pre-populated from existing patient records such as the summary care record or a local shared health and care record.

4.19 Medications

- This section should only be used to record medications administered by the paramedics prior to handover.
- Each attribute of the medication item (e.g. name, route, dose etc) should be presented in a clear and logical format (e.g. in tabular form). See National Patient Safety Agency (NPSA) guidance (<http://www.nrls.npsa.nhs.uk/resources/collections/design-for-patient-safety/?entryid45=66713>).
- dm+d (NHS Dictionary of Medicines and Devices) is the national standard that should be used for recording medications.
- System design should allow for certain medications of particular importance (e.g. anticoagulants, steroids, etc.) to be prominently displayed so that they are not overlooked.

4.20 Information and Advice Given

In some instances professionals may want to communicate the specific information and advice which was given to the patient. It is important that this is concise and is only information which it is pertinent.

4.21 Person and Carer Concerns, Expectations and Wishes

Advance Statements

Advance statements are written statements of patient preferences, wishes, beliefs and values regarding future care. These statements are not legally binding, however should be taken into account by all clinicians.

4.22 Documents and Images

This section enables the attachment of any documents, files or images that need to be included in the transfer message, for example if an ECG trace file is to be sent.

This section includes details for documents and images. It includes the metadata that is required for the document or image and any link to the actual document or image. When displayed in the receiving system, documents and images should be organised logically in date order. Local implementations will need to determine the best logical groupings for use here.

A specific cluster is included for images as these are a special case where there is a document (e.g. a KOS document) with information about the image and often produced by the machine or imaging system, and a specific set of additional information (such as event code list and format code). Note that this document is separate from say an investigation report which provides the results or interpretation of the imaging.