

Ambulance Data Set

Requirements Specification



Data Alliance Partnership Board

The Data Alliance Partnership Board (DAPB), which holds delegated authority from the Secretary of State for Health and Social Care, has approved a new information standard for publication 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 Standards Assurance Service (DSAS) and endorsed by the Data Alliance Partnership Sub Board (DAPSB).

This information standard comprises the following documents:

- Implementation Guidance
- Requirements Specification (this document)

An Information Standards Notice (DAPB3107 Amd 63/2021) has been issued as a notification of use and implementation timescales. Please read this alongside the documents for the standard.

The controlled copies of these documents can be found on the [NHS England 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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Reviewers

This document must be reviewed by the following people:

Reviewer name	Title / Responsibility	Date	Version
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This document must be approved by the following people:

Name	Title / Responsibility	Date	Version
Sheela Kumar	ADS Project Manager	08/02/2024	0.4

Glossary of Terms

Term	Abbreviation	Description
Ambulance Services in scope of the ADS	NEAS	North East Ambulance Service NHS Foundation Trust
	YAS	Yorkshire Ambulance Service NHS Trust
	NWAS	North West Ambulance Service NHS Trust
	WMAS	West Midlands Ambulance Service University NHS Foundation Trust
	EMAS	East Midlands Ambulance Service NHS Trust
	SWAST	South Western Ambulance Service NHS Foundation Trust
	SCAS	South Central Ambulance Service NHS Foundation Trust
	SECAMB	South East Coast Ambulance Service NHS Foundation Trust
	LAS	London Ambulance Service NHS Trust
	EAAS	East of England Ambulance Service NHS Trust
IOW	Isle of Wight Ambulance Service	
Ambulance Data Set	ADS	-
Application Programming Interface	API	An API is a service interface/software intermediary that allows two applications to talk to each other.
Arden and GEM Data Services for Commissioners Regional Office	A & G DSCRO	A regional office of NHS England.
Arden and GEM Commissioning Support Unit	A & G CSU	Data processor for NHS England.
Client/Client Solution		Client is the program using the API

Term	Abbreviation	Description
Computer Aided Dispatch	CAD	CAD is the system used to record all data related to 999 and urgent requests for ambulance assistance and is primarily used by Emergency Operations Centre (EOC) staff to assess, prioritise and, if necessary, dispatch ambulance crews to 999 calls.
Data Alliance Partnership Board	DAPB	<p>The Secretary of State for Health and Social Care tasked NHSX (now part of NHS England) with bringing together key national organisations that use health and care data into a Data Alliance Partnership (DAP).</p> <p>The DAP member organisations are committed to maximising the benefits from using and sharing data already held in health and care systems to minimise the burden of collecting more data from frontline service providers. The mission is to collect once and use for multiple purposes to benefit health and care provision and planning.</p> <p>The Data Alliance Partnership Board (DAPB) has responsibility to oversee the process and supports signed up DAP member organisations achieve its goals.</p>
Emergency Operations Centre	EOC	-
Electronic Patient Record	EPR	-
General Data Protection Regulation	GDPR	The GDPR forms part of the data protection regime in the UK, together with the Data Protection Act 2018 (DPA 2018). The main provisions of this apply, like the GDPR, since 25th May 2018.
Information Asset Owner	IAO	Mandated role with the individual appointed, responsible for ensuring that information assets are handled and managed appropriately.
Message Exchange for Social Care and Health	MESH	MESH is used to transfer electronic messages, directly and securely from one application to another.

Term	Abbreviation	Description
Supplier Conformance Assessment List	SCAL	A technical document which details the consumer supplier approach to information governance, clinical safety, functional testing and SMSP-PDS (Spine Mini Service Provider for Personal Demographics Service) requirements.
Technical Specification		<p>The Technical Specification defines each data item within the data set.</p> <p>The two documents that comprise the Technical Specification split the data set into several groups, each containing data items and values:</p> <ul style="list-style-type: none"> • Data Content Specification • FHIR Specification
Fast Healthcare Interoperability Resources	FHIR®	FHIR is a standard describing data formats and elements and an application programming interface for exchanging electronic health records. The standard was created by the Health Level Seven International health-care standards organization.

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1. Purpose

This document precisely defines the Ambulance Data Set (ADS) and describes the associated standard, where and why it applies and what is required of stakeholders to comply. This document should be read in conjunction with the accompanying technical specifications.

Section 1 of the supporting [Implementation Guidance](#) includes a description of the documentation available and how it may be used by both existing and new users.

1.1. Background

Lord Carter's 2018 review ([Operational productivity and performance in English NHS Ambulance Trusts](#)) identified unwarranted variation in the delivery of ambulance services, as well as the potential savings of £500 million that could be made in efficiencies by 2020/21.

The report included the following recommendation:

“NHS England and NHS Improvement developing a single data warehouse and national data set for the ambulance service that underpins the Model Ambulance Service portal by autumn 2019. This should include a single service specific data dictionary”.

Section 1.33 of the [NHS Long Term Plan 2019](#) set out a commitment to develop an ambulance data set to:

“...bring together data from all ambulance services nationally in order to follow and understand patient journeys from the ambulance service into other urgent and emergency healthcare settings”.

1.2. Project information

The ADS project was established in 2019 to develop a national minimum data set for Ambulance Services, following an initial feasibility study undertaken in early 2018. The opportunity to develop a consistent ADS that links with other data sets such as the Emergency Care Data Set (incorporating same day emergency care), offers a range of benefits to Ambulance Services and system partners in tracking patients across the healthcare system and monitoring outcomes. It also facilitates national data comparison for coding reviews as well as best practice and variation review. The ADS project seeks to provide a centralised data warehouse to extract reliable and standardised information alongside reducing the burden on individual Ambulance Services to provide repeat and duplicate information to a wide range of requesting parties.

Information about how patients access ambulance provision, and the care and treatment that they receive, is currently collected by all Ambulance Services. There is, however, considerable variation in the way this information is collected, reported, analysed and benchmarked by individual services. Detailed reporting on patient outcomes is limited, and there is a lack of integration with the wider Urgent & Emergency Care system in order to understand the whole patient journey.

1.3. Anticipated benefits

The following are anticipated benefits of the ADS:

- greater ability to demonstrate the value of Ambulance Services
- better understanding of call/incident, response and patient level data, especially where linked with wider data sets (e.g., ECDS)
- support research and development of clinical care delivered by Ambulance Services
- support clinical feedback and supervision mechanisms
- support National Tariff processes
- support benchmarking of Ambulance Service Activity
- monitoring and evaluation of Health or Ambulance Improvement Programmes
- support understanding of the health needs of the population served by Ambulance Services

1.4. ADS data flow definitions

ADS accords with the [FHIR specification](#) to transport and submit messages in JSON format to the NHS England Data Processing Service, via the Ambulance services' own Client and NHS England's API.

Data Set Title	Description	Status	Submission Frequency
Ambulance Data Set	Contains details of all contacts including Computer Aided Dispatch and Electronic Patient Record	Mandatory	Daily (between 03.00 and 06.00)

2. Overview

2.1. Summary

Standard	
Standard number	Standard number
Standard Title	Ambulance Data Set
Standard Description	<p>NHS England and the Ambulance Services require accurate data for the following types of patient activity:</p> <ul style="list-style-type: none"> • Hear and Treat; when a person does not require an ambulance but a clinician is able to provide treatment and advice over the phone • See and Treat; when a person does not require hospital care but instead a paramedic or another clinician provides treatment at the scene, which could be in someone's home or in the community • See and Convey; conveyed by ambulance to a healthcare provider • Other <p>ADS is a patient-level data set whose purpose is to process robust, comprehensive, nationally consistent, and comparable person-based data on urgent and emergency care activity.</p> <p>ADS is closely aligned with the care and management of the patient, and the data processed is for secondary uses.</p>
In Scope	<p>The FHIR Specification describes the data items to be sourced from EOC and clinical EPR systems for ADS.</p> <p>All 11 Ambulance Services in England are in scope to supply data in support of secondary uses (not for the direct care of the patient).</p>
Out of Scope	<ul style="list-style-type: none"> • Primary Uses • UK Ambulance Services outside of England • Non-Emergency Ambulance data for example Patient Transport Services
Implementation Completion Date	<p>All 11 Ambulance Services in England MUST submit ADS data on a daily basis using their Client via the Ambulance Analytics API.</p> <p>Ambulance Services MUST implement the ADS by 1 July 2024.</p>

2.2. Supporting products

Reference	Title
DAPB3107 Amd 63/2021	Ambulance Data Set: <ul style="list-style-type: none"> Requirements Specification (this document) Implementation Guidance

2.3. Related standards

Ref#	Reference	Title
1	SCCI0034	SNOMED CT
2	DCB1605	Accessible Information
3	ISB 0149	NHS Number
4	ISB 0149-02	NHS Number for Secondary Care
5	DAPB0092-2062	Emergency Care Date Set (ECDS)
6	DCB0129	Clinical Risk Management: its Application in the Manufacture of Health IT Systems
7	DCB0160	Clinical Risk Management: its Application in the Deployment and Use of Health IT Systems

2.4. Contacts

Developer	
Name	Ambulance Data Set Project – UEC Transformation Team
Organisation	NHS England
Email Address	England.Ambulance@nhs.net
Maintenance Manager	
Name	NHS Service Desk
Organisation	NHS England
Email Address	support.digitalservices@nhs.net

3. Requirements

3.1. Overview

The table below outlines the requirements for the 11 Ambulance Services in England:

Providers current Submission Status	Expected Change for Providers
Providers submitting ADS data for the first time	<ul style="list-style-type: none"> implement ADS from the Implementation Completion Date starts from 1 April 2023 of this Standard

3.2. Information specification

The ADS submission requirements are shown below.

The following requirements use either **MUST** or **SHOULD** as defined in [RFC-2119](#), where:

- **MUST**: “means that the definition is an absolute requirement of the specification”
- **SHOULD**: “means that there may exist valid reasons in particular circumstances to ignore a particular item, but the full implications must be understood and carefully weighed before choosing a different course”

#	Requirement
	Healthcare Providers
1	<p>The 11 English Ambulance Services listed above MUST flow data daily.</p> <p>This requires the data providers to ensure their relevant data systems meet this capability by the dates shown in conformance criteria below.</p> <p>Daily flow of data is:</p> <ul style="list-style-type: none"> • a single flow of all completed incidents for the previous 24 hours, collected at or before 23:59:59, where the incident has not been submitted before. If the incident is not completed the data is not sent until the next daily flow of data. • flowed daily between 03.00 and 06.00.
2	<p>All providers of ADS MUST automate their data submission processes to flow daily data.</p> <p>This requires data providers to ensure their relevant data systems meet this capability.</p>

#	Requirement
	Healthcare Providers
3	Where providers of ADS require a change to the data set, their change proposal(s) MUST be submitted using the Data Set Net Change Protocol .

3.3. Conformance criteria

This section describes the actions that should be satisfied to ensure that the information standard is being used correctly by an organisation and that the conformance criteria have been met.

#	Conformance criteria
1	<p>By July 2024</p> <p>the 11 English Ambulance Services listed above flow data daily.</p> <p>AND (where applicable*) 100% of patient records have valid fields as defined in the FHIR Specification.</p> <p>Conformance with the ADS is enabled by adherence to the FHIR Specification in accordance with the submission frequency, and subsequent attention to Data Quality issues.</p> <p>Data Quality validation applies to the correct use of code sets and validation rules, including correct format / length, enumerated national codes where applicable (for example, SNOMED CT), and compliance with the field completion requirements (Mandatory, Required or Optional).</p>

Following submission, any data item containing records that do not conform to the FHIR requirements or other necessary validation rules (for example, field length and format) will be handled according to the [ADS Business Rules](#). In these cases, a validation report is provided to assist the sender in the identification and resolution of issues.

4. Concept of operation

4.1. Data collectors and providers

- **Emergency Operations Centre staff:** are responsible for capturing information that populates their Computer Aided Dispatch system. Items from this system as identified in the FHIR specification form part of the ADS.
- **Clinicians:** are responsible for capturing Electronic Patient Record information as part of the care of the patient. Items from this system as identified in the FHIR specification form part of the ADS.
- **YAS Client Solution:** YAS have developed the Client Solution for 10 of the 11 Ambulance Services. The Client Solution ‘interfaces’ with the NHS England API and allows automated flow of data.
- **NWAS Client Solution:** NWAS have developed their own Client Solution. The Client Solution ‘interfaces’ with the NHS England API and allows automated flow of data.
- **Ambulance informatics staff:** are responsible for the ADS data quality.

4.2. Secondary uses

Information generated through implementation of this standard is analysed and used by users of NHS England and Ambulance Services and researchers.

Where the appropriate permissions are in place, the data enables users to analyse and compare granular, high-quality data for reporting, audit, research and for service delivery. It provides information in support of the following:

- the provision of an accurate and relevant record of why patients contact Emergency Operations Centres in England, the response to that contact, the quality of care that they receive and (where transportation is required) what happens to them after the handover to the Urgent and Emergency Care destination. This in turn enables a greater understanding of patient outcomes and the value added by emergency response services.
- a greater understanding of the complexity of the needs of patients who require an emergency care response and the services required to treat them appropriately.
- a better understanding of the various urgent and emergency care settings to which patients are handed over.
- more information to help understand who is delivering what emergency care response and in what setting; with the potential to inform more effective and efficient resource deployment.
- a national picture of the number of patients requiring an emergency response which supports the development of targeted prevention strategies. This can, in turn, help reduce the number of emergency responses and improve future patients’ experience, support

clinical feedback, supervision mechanisms and opportunities to better link data on care given to inform further improvements to pre-hospital care.

4.3. Use of SNOMED CT

SNOMED CT is a collaboratively developed international clinical terminology that meets the diverse needs and expectations of clinicians worldwide and is now accepted as a common global language for health terms.

Patients and healthcare professionals benefit from improved health records, clinical decisions and analysis, leading to higher quality, consistency and safety in healthcare delivery. 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 .

Interoperability of IT systems is a focus of the NHS Long Term Plan, and SNOMED CT plays a key role in driving this agenda forward.

The purpose of using SNOMED CT in the ADS is to:

- enable clinical information inputted at EPR level to be recorded consistently
- enable support systems to check the record after completion by the user
- enable easier linking between clinical records and guidelines, for example, to support clinical feedback of care given by Ambulance Clinicians
- enable the delivery of relevant data to support clinical research and contribute evidence for future improvements in treatments given by Ambulance Clinicians

Further details of how SNOMED CT should be implemented to support ADS are available in the [ADS User Guide](#).

4.4. Working practices

Full guidance, including changes to working practices, is available in [the ADS User Guide](#).

4.5. Information Governance

4.5.1. 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), 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.

NHS England produces an overall guide to [data security standards](#) via a Data Security and Policy Toolkit.

4.5.2. Overview

The legal flow of ADS data to NHS England is supported by a [Direction](#) issued by the Department for Health and Social Care. NHS England is exempt from having to apply for section 251 support from the Confidentiality Advisory Group (CAG) when mandated to collect data via Directions from 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 patient 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.

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

[An Ambulance Data Set Data Provision Notice \(DPN\)](#), produced by NHS England is in place. This confirms the purpose, benefits and scope of the collection and confirms NHS England's legal requirement to collect the data.

4.5.3. 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 England website](#).

[NHS England assessment](#) confirms required compliance to GDPR. During the development of this release of the standard, Data Protection Impact Assessments (DPIAs) were completed.

Any concerns regarding information governance should be addressed to dataset.development@nhs.net

4.5.4. Type 1 opt-out

Where a patient does not want information that identifies them to be shared outside their general 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 specific circumstances required by law, such as a public health emergency like an outbreak of a pandemic disease.

4.5.5. National data opt out

There are three National Data Opt-Out considerations and in each case National Data Opt-Out does not apply. In line with the National Data Opt-Out Operational Policy Guidance Document. It is noted that:

- Collection: Data are to be received into NHS England under a Data Provision Notice which acts as a legal requirement to disclose; therefore, the National Data Opt-Out does not apply to NHS England's collection of the data.
- Dissemination: When data is anonymised for access (pseudonymised in this case), it is anonymised through technical controls, including the removal of direct identifiers, minimisation of data by selection of specific codes (where feasible for the NCDR, where NHS England will determine, according to their Data Sharing Agreement), and creation of derived fields where appropriate.
- Organisational and contractual controls are also applied, as necessary, to ensure the data does not fall within the definition of "personal data" within UK GDPR. As a result of the application of these controls national data opt-out does not apply.

National Data Opt-Outs do not apply to staff details.

Data to be disseminated will be pseudonymised in line with the [ICO code of practice](#) so the National Data Opt-Out does not apply to such data.

4.5.6. Patient identifiable data items

The ADS includes several patient identifiable items:

- NHS Number
- Unique Patient Contact Record Identifier
- Patient Name
- Date of Birth
- Patient Address Postcode
- Free text fields – in which patient identifiable data could incorrectly be entered.
Responsibility rests with the provider to ensure that no inappropriate data is submitted to NHS England. IAO safeguards exist within NHS England to minimise the impact of inappropriate data being erroneously received.

ADS necessarily includes patient identifiers to support the linkage of activity to create a complete picture of the patient pathway to Urgent and Emergency Care Departments.

4.5.7. Secondary use

Secondary use of data is subject to compliance with the appropriate legal basis, and Ambulance service data providers should review their own information governance standards to ensure they are complying accordingly.

4.6. Ethics

There are no known ethical issues associated with ADS. An Equality Health Impact Statement (EHIA) has been conducted by NHS England, ADS acts as an enabler and EHIA's should be completed when users are applying to review the Secondary Use data.

4.7. Clinical safety

The ADS utilises data already routinely collected in Ambulance Service CAD and EPR systems, collated by NHS England 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.

A clinical safety report was produced by NHS England for the first release of ADS following a hazard assessment workshop. Consensus was that there were minimal clinical safety risks associated with the implementation of the ADS as the data set is not primarily used as a tool to support clinical decision making, but rather to re-use data about specific episodes of care for secondary use purposes.

4.8. Clinical governance

ADS supports clinical governance by providing data to help inform maintenance and improvement of the quality of patient care within the health system. This is achieved through the national reporting of comparable primary use data for secondary use purposes to standardised definitions that support transparency. This supports (a) the audit of providers by organisations such as Care Quality Commission and other research and commercial organisations and (b) the identification of outliers to indicate areas to focus resources for investigation purposes.

4.9. Data quality

ADS does not mandate design of local systems or specific local data quality measures. However, data providers should conform to their own local governance arrangements to ensure good data quality.

4.9.1. 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)?

4.9.2. Organisational and departmental objectives

Where the data set is used to monitor progress towards objectives, there should 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.

4.9.3. Timeliness

Data is entered in local systems and flowed to NHS England between 03:00 and 06:00 daily, so that the data set can deliver meaningful, relevant and timely reports for stakeholders.

4.9.4. National data quality

ADS mandates automated daily data flow. In all cases the daily data flow is expected to meet the ADS FHIR specification, which goes some way to ensure that only valid formats

and codes are submitted. The validations, which are described in the [business rules](#) only relate to the structure and format of the submitted data. Reports will be sent weekly from NHS England to the provider Ambulance Service via MESH.

Further validation will involve the continued analysis of submitted data by the provider Ambulance Service and NHS England, to identify potential data quality issues for an individual provider or at a national level.

4.10. Data availability

The Ambulance Data Set Information Standard is effective from 1 April 2024.

- Ambulance services can obtain their own unlinked data via the NHS England [Data Access Environment](#).
- Where Ambulance services require their data linked to other urgent and emergency care secondary purposes data (for example ECDS) they should contact the [Data Access Request Service](#) (DARS) to discuss their request.
- Requests for access to ADS data from all other parties should also be made to the [Data Access Request Service](#) (DARS).

5. Implementation and use

5.1. Implementation and user guidance

Implementation guidance ([and other user guidance](#)) is available to support this release.

5.2. Governance

NHS England have overall management responsibility for the governance of the Ambulance Data Set.

Ongoing maintenance of ADS is undertaken by the digital transformation directorate within [NHS England](#).

5.3. Technical architecture

5.3.1. Data validation

Following validation by the API that the data sender is authentic, the data flows to NHS England's Data Processing Service via the DPS Data Collection API.

5.4. Using the MESH service

[MESH](#) is used for the transmission of ADS DQ reports from NHS England to the originating Ambulance service. There are three types of [MESH](#) and it is for the Ambulance services to determine which is most suitable to their needs and invoke the chosen process.

6. Helpdesk

If any issues please contact the england.ambulance@nhs.net

Appendix A: Useful web links

1	Section 250 of the Health and Social Care Act 2012	https://www.legislation.gov.uk/ukpga/2012/7/section/250
2	Ambulance Data Set (DAPB3107)	Short URL: https://digital.nhs.uk/isce/publication/dapb3107 Full URL: https://digital.nhs.uk/data-and-information/information-standards/information-standards-and-data-collections-including-extractions/publications-and-notifications/standards-and-collections/dapb3107-ambulance-data-set
3	Open Government License (OGL)	https://www.nationalarchives.gov.uk/doc/open-government-licence/
4	Supplier Conformance Assessment List (SCAL)	https://digital.nhs.uk/services/spine/spine-mini-service-provider-for-personal-demographics-service/supplier-conformance-assessment-list-scal
5	FHIR	https://www.hl7.org/fhir/overview.html
6	Operational productivity and performance in English NHS Ambulance Trusts (Lord Carter Review)	https://www.england.nhs.uk/publication/lord-carters-review-into-unwarranted-variation-in-nhs-ambulance-trusts/
7	NHS Long Term Plan 2019	https://www.longtermplan.nhs.uk/online-version/
8	FHIR specification	https://simplifier.net/guide/ambulancedatasetadsfhirbundleimplementationguide/ads-home
9	Transforming urgent and emergency care services in England (Keogh review): Clinical models for ambulance services	https://www.nhs.uk/nhsengland/keogh-review/documents/uecr-ambulance-guidance-fv.pdf
10	FHIR Specification	https://simplifier.net/guide/ambulancedatasetadsfhirbundleimplementationguide/ads-home

11	SNOMED CT (SCCI0034)	<p>Short URL: https://digital.nhs.uk/isce/publication/SCCI0034</p> <p>Full URL: https://digital.nhs.uk/data-and-information/information-standards/information-standards-and-data-collections-including-extractions/publications-and-notifications/standards-and-collections/scci0034-snomed-ct</p>
12	Accessible information (DCB1605)	<p>Short URL: http://digital.nhs.uk/isce/publication/dcb1605</p> <p>Full URL: https://digital.nhs.uk/data-and-information/information-standards/information-standards-and-data-collections-including-extractions/publications-and-notifications/standards-and-collections/dcb1605-accessible-information</p>
13	NHS Number (ISB 0149)	<p>Short URL: https://digital.nhs.uk/isce/publication/isb0149</p> <p>Full URL: https://digital.nhs.uk/data-and-information/information-standards/information-standards-and-data-collections-including-extractions/publications-and-notifications/standards-and-collections/isb-0149-nhs-number</p>
14	NHS Number for Secondary Care (ISB 0149-02)	<p>Short URL: https://digital.nhs.uk/isce/publication/isb0149</p> <p>Full URL: https://digital.nhs.uk/data-and-information/information-standards/information-standards-and-data-collections-including-extractions/publications-and-notifications/standards-and-collections/isb-0149-nhs-number</p>
15	Emergency Care Data Set (ECDS) (DAPB0092-2062)	<p>Short URL: https://digital.nhs.uk/isce/publication/dapb0092-2062</p> <p>Full URL: https://digital.nhs.uk/data-and-information/information-standards/information-standards-and-data-collections-including-extractions/publications-and-notifications/standards-and-collections/dapb0092-2062-commissioning-data-sets-emergency-care-data-set</p>

16	Clinical Risk Management: its Application in the Manufacture of Health IT Systems (DCB0129)	Short URL: https://digital.nhs.uk/isce/publication/dcb0129 Full URL: https://digital.nhs.uk/data-and-information/information-standards/information-standards-and-data-collections-including-extractions/publications-and-notifications/standards-and-collections/dcb0129-clinical-risk-management-its-application-in-the-manufacture-of-health-it-systems
17	Clinical Risk Management: its Application in the Deployment and Use of Health IT Systems (DCB0160)	Short URL: http://digital.nhs.uk/isce/publication/dcb0160 Full URL: https://digital.nhs.uk/data-and-information/information-standards/information-standards-and-data-collections-including-extractions/publications-and-notifications/standards-and-collections/dcb0160-clinical-risk-management-its-application-in-the-deployment-and-use-of-health-it-systems
18	RFC-2119	https://www.ietf.org/rfc/rfc2119.txt
19	Data Set Net Change Protocol	http://www.datadictionary.nhs.uk/data_dictionary/messages/cds_v6-2/data_sets/cds_v6-2_type_005n_-_cds_transaction_header_group_-_net_change_protocol_fr.asp?shownav=1
20	FHIR Specification	https://simplifier.net/guide/AmbulanceDataSetADS-FHIRBundleImplementationGuide/ads-Home/ADS-Design/DataMapping.page.md?version=current
21	ADS Business Rules (NHS Futures)	https://future.nhs.uk/ADSProject1/view?objectID=35219920&done=OBJChangesSaved
22	SNOMED International	http://www.snomed.org/
23	ADS User Guide (NHS Futures)	https://future.nhs.uk/ADSProject1/view?objectID=35219920&done=OBJChangesSaved
24	The Caldicott Committee Report on the Review of Patient-Identifiable Information (Dec 1997)	http://webarchive.nationalarchives.gov.uk/+www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationspolicyandGuidance/DH_4068403
25	Information: To share or not to share? The Information Governance Review (March 2013)	https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/192572/2900774_InfoGovernance_accv2.pdf

26	National Data Guardian for Health and Care Review of Data Security, Consent and Opt-Outs (June 2016)	https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/535024/data-security-review.PDF
27	Data Security and Protection Toolkit	https://www.dsptoolkit.nhs.uk/
28	Ambulance Data Set Directions 2022	https://digital.nhs.uk/about-nhs-digital/corporate-information-and-documents/directions-and-data-provision-notice/nhs-england-directions/ambulance-data-set-directions-2022
29	sections 254 and 255 of the Health and Social Care Act 2012	http://www.legislation.gov.uk/ukpga/2012/7/contents/enacted
30	How we look after information	https://digital.nhs.uk/data-and-information/keeping-data-safe-and-benefitting-the-public/how-we-look-after-your-health-and-care-information
31	Ambulance Data Set Data Provision Notice (DPN)	https://digital.nhs.uk/about-nhs-digital/corporate-information-and-documents/directions-and-data-provision-notice/data-provision-notice-dpns
32	General Data Protection Regulation (GDPR)	https://ico.org.uk/for-organisations/data-protection-reform/overview-of-the-gdpr/
33	GDPR - NHS England website	https://digital.nhs.uk/data-and-information/keeping-data-safe-and-benefitting-the-public/gdpr
34	ADS on the GDPR register - NHS England website	https://digital.nhs.uk/data-and-information/keeping-data-safe-and-benefitting-the-public/gdpr/gdpr-register/ambulance-data-set-service
35	ICO code of practice	https://ico.org.uk/for-organisations/uk-gdpr-guidance-and-resources/data-sharing/data-sharing-a-code-of-practice/
36	Data Access Environment	https://digital.nhs.uk/services/data-access-environment-dae
37	Data Access Request Service	https://digital.nhs.uk/services/data-access-request-service-dars
38	NHS Digital and NHS England complete merger	https://www.england.nhs.uk/2023/02/nhs-digital-and-nhs-england-complete-merger/

39	MESH	https://digital.nhs.uk/services/message-exchange-for-social-care-and-health-mesh
40	MESH Guidance Hub	https://digital.nhs.uk/services/message-exchange-for-social-care-and-health-mesh/mesh-guidance-hub