



**eHealth Diagnostic Imaging Report
Information Requirements v1.1**

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Approved for external use

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1 Introduction

1.1 Purpose

This document presents the information requirements regarding the clinical document artefact resulting from the eHealth Diagnostic Imaging Report capability in the personally controlled electronic health record (PCEHR).

These information requirements are a logical set of data items for exchange and are therefore independent of any particular platform, technology, exchange format, or presentation format.

The primary purpose of this document is to provide detailed information requirements for the Diagnostic Imaging Report clinical document which can be uploaded to an individual's PCEHR. This document informs the technical specifications for the Diagnostic Imaging Report clinical document.

Further, this document defines the requirements for a nationally agreed exchange of information between healthcare providers and the PCEHR infrastructure in Australia, independent of exchange or presentation format.

It is anticipated that these information requirements will:

- promote a common understanding of the requirements for the construction and consumption of these records;
- provide a common framework for the development and use of semantically interoperable information components to be exchanged between applications, providers, and jurisdictions;
- provide a common framework for defining queries using these information requirements at logical levels, which may be adopted for implementations in local, jurisdictional or national electronic health record environments;
- provide a common framework upon which to define nationally agreed, specialty-specific information requirements; and
- provide a common framework for nationally defined mappings to specific exchange formats (i.e. mappings to XML payloads or streams).

1.2 Intended audience

This document is intended for all interested stakeholders including:

- clinicians;
- early adopter hospitals and health departments in the process of planning, implementing or upgrading eHealth systems;
- software vendors developing eHealth system products;
- senior managers and policy makers, clinical experts, health information managers, IT operations and support teams, system integrators;
- consumers and consumer representatives; and
- the Commonwealth Department of Health project team.

1.3 Overview

These information requirements define the structure of the Diagnostic Imaging Report clinical document. This clinical document is intended to be sent to and stored in the PCEHR system, viewed through the PCEHR portals, and available as a clinical document for download from the PCEHR for viewing in the local system.

These information requirements relate to the Diagnostic Imaging Report clinical document, as distinct from a diagnostic imaging report that is communicated point-to-point between an authoring pathology provider and a requesting healthcare provider.

The information presented here is defined at the logical level, and is therefore independent of specific exchange or presentation formats.

1.4 Scope

The scope of the eHealth Diagnostic Imaging Report capability is to describe information solely related to the individual's diagnostic imaging examination.

As these are information requirements relating to the clinical document, this requirements document does not describe any function present in, or required of, either consumer or provider portals.

1.5 User interface and format

The requirement that a particular piece of data is exchanged in a Diagnostic Imaging Report clinical document does not imply a requirement on the user interface. Some data elements – for example, 'Healthcare Provider's (Author) Organisation identifier' – are intended purely for purposes of internal processes within the receiving system. Other data elements (e.g. 'Date of Birth') have a number of different presentation options available (e.g. 'Birth Day' + 'Year of Birth').

The names given to data components and data elements do not imply that these must be used as data element labels on a user interface. Implementations that modify the data element names to accommodate local practices (e.g. 'Person name' represented as 'Patient Name') will still conform to this specification, but only if the meaning of the data is not modified.

The order in which the data elements are listed in this document is not indicative of the order in which this data will be exchanged or presented to the user.

1.6 Assumptions

These information requirements are based on the following assumptions:

- The solution design is based on the HL7 CDA standard, and others as relevant (e.g. CDA Document Author, and Template Identifier).
- All address and communication information related to healthcare providers is assumed to relate to the provider workplace, and not to the personal information of any staff members.
- References to 'report' mean the clinical information that is sent from the service provider to the requester (i.e. the results including any images or empirical data plus any interpretation provided).

- References to any 'PDF document' or 'PDF attachment' mean the electronic representation – in PDF format – of the clinical information that is returned to the requester. It is assumed that the PDF document content matches that of its associated report.
- References to 'the document' refer to the CDA document; the artefact to which these information requirements apply.

2 Subject of Care

The individual is the person about whom the health information has been captured; the subject of care on the diagnostic imaging report.

2.1 Individual (core)

Data item	Req No.	Requirement statement	Rationale	Present in view payload
Individual Healthcare Identifier (mandatory)	022082	The document SHALL contain the individual's Individual Healthcare Identifier (IHI).	<p>Enables interoperability. Eliminates ambiguity. Supports the indexing of clinical documents.</p> <p>If an IHI is not available, then the individual's PCEHR cannot be identified.</p> <p>Traces</p> <p>Bus Req # 024623. R5-PATH-004a Bus Req # 024681. R5-DIMG-004a</p>	Yes
Individual's Title (optional)	022081	The document SHOULD contain at least one title for the individual.	<p>Titles such as 'Mrs', 'Mr', 'Dr' etc. are useful when communicating with the individual.</p> <p>Traces</p> <p>Bus Req # 024623. R5-PATH-004a Bus Req # 024681. R5-DIMG-004a</p>	Yes

Data item	Req No.	Requirement statement	Rationale	Present in view payload
Individual's Given Name (optional)	023056	The document SHOULD contain at least one given name for the individual.	<p>To enable consistent and correct identification of the individual's document. Assists in verifying that the document relates to the individual.</p> <p>Traces</p> <p>Bus Req # 024623. R5-PATH-004a Bus Req # 024681. R5-DIMG-004a</p>	Yes
Individual's Family Name (mandatory)	023058	The document SHALL contain the individual's family name.	<p>To enable consistent and correct identification of the individual. This is a required field when validating IHIs against the Healthcare Identifiers (HI) Service.</p> <p>Traces</p> <p>Bus Req # 024623. R5-PATH-004a Bus Req # 024681. R5-DIMG-004a</p>	Yes
Individual's Name Suffix (optional)	023059	The document SHOULD contain the individual's name suffix where applicable.	<p>Suffixes such as 'Snr', 'Jnr' etc. can be a useful aid in the correct and unique identification of the individual.</p> <p>Traces</p> <p>Bus Req # 024623. R5-PATH-004a Bus Req # 024681. R5-DIMG-004a</p>	

Data item	Req No.	Requirement statement	Rationale	Present in view payload
Individual's Sex (mandatory)	024032	The document SHALL contain the individual's sex.	<p>To enable consistent and correct identification of the individual. This is a required field when validating IHIs against the HI Service. The individual's sex is also useful in clinical decision making.</p> <p>Traces</p> <p>Bus Req # 024623. R5-PATH-004a Bus Req # 024681. R5-DIMG-004a</p>	Yes
Individual's Date of Birth (mandatory)	023060	The document SHALL contain the individual's date of birth.	<p>To enable consistent and correct identification of the individual. This is a required field when validating IHIs against the HI Service. Date of birth is also useful in clinical decision making.</p> <p>Traces</p> <p>Bus Req # 024623. R5-PATH-004a Bus Req # 024681. R5-DIMG-004a</p>	Yes
Date of Birth accuracy indicator (optional)	024026	The document SHOULD contain a date of birth accuracy indicator.	<p>To assist in the correct identification of the individual.</p> <p>It is important for clinicians to know when a provided date of birth is an approximation to assist in clinical decision making.</p> <p>Traces</p> <p>Bus Req # 024623. R5-PATH-004a Bus Req # 024681. R5-DIMG-004a</p>	

2.2 Individual (extension)

Data item	Req no.	Requirement statement	Rationale	Present in view payload
Individual's Address (mandatory)	024041	The document SHALL contain at least one address for the individual.	To enable consistent and correct identification of the individual. Traces Bus Req # 024623. R5-PATH-004a Bus Req # 024681. R5-DIMG-004a	Yes
Individual's Electronic Communication Details (optional)	024042	The document SHOULD contain at least one set of electronic communication details for the individual. These include (but are not limited to) telephone number, mobile phone number, email address etc.	To enable electronic communication with the individual. Traces Bus Req # 024623. R5-PATH-004a Bus Req # 024681. R5-DIMG-004a	
Indigenous Status (mandatory)	024033	The document SHALL state whether a person identifies as being of Aboriginal and/or Torres Strait Islander origin, or give a clear indication that their Indigenous status was not stated.	Members of the Indigenous community may have specific health needs and be eligible for a range of specific services. Access to this information may contribute to improved Indigenous health. Traces Bus Req # 024623. R5-PATH-004a Bus Req # 024681. R5-DIMG-004a	

3 Healthcare Provider - Examination Requester

The healthcare provider who requests one or more diagnostic imaging investigations for the subject of care is known as the examination requester.

The modelling used in this section assumes a non-PCEHR participant, meaning that the test requester need not participate in the PCEHR, nor require an HPI-O/HPI-I (i.e. they need not be in the HI Service). This is neither a constraint nor a requirement, but a recognition that a test requester need not have, or even know their HPI-O/HPI-I. In many cases the requester will be a participant and their HPI-O/HPI-I will be known to them. As always, providers are encouraged to provide as much metadata as possible when generating CDA documents.

It is assumed that a given report is generated in response to a single request (i.e. a report will have one and only one requester). This implies that requests are not collated from the same referrer, or different referrers, before examinations are performed, but are processed as individual cases. The single request will contain one or more examination requests (i.e. orders).

Data item	Req No.	Requirement statement	Rationale	Present in view payload
Healthcare Provider Organisation Name (mandatory)	023070	The document SHALL contain the name of the organisation the healthcare provider is representing at the time of CDA document creation.	<p>To enable consistent and correct identification of the healthcare provider organisation. This is a required field when validating HPI-Os against the HI Service.</p> <p>Traces</p> <p>Bus Req # 024624. R5-PATH-004b Bus Req # 024626. R5-PATH-004e Bus Req # 023285. R5-PATH-002 Bus Req # 024682. R5-DIMG-004b</p>	Yes

3.1 Non-PCEHR participating Healthcare Provider (core)

Data item	Req No.	Requirement statement	Rationale	Present in view payload
Healthcare Provider Identifier-Individual (optional)	024601	The document SHOULD contain the Healthcare Provider Individual Identifier (HPI-I).	<p>To enable consistent and correct identification of the healthcare provider.</p> <p>Traces</p> <p>Bus Req # 024624. R5-PATH-004b Bus Req # 024682. R5-DIMG-004b Bus Req # 024685. R5-DIMG-004e Bus Req # 022741. R5-DIMG-028 (9223)</p>	
Healthcare Provider Identifier-Organisation (optional)	024602	The document SHOULD contain the Healthcare Provider Identifier-Organisation (HPI-O) of the organisation the healthcare provider is representing at the time of the CDA document creation.	<p>To enable consistent and correct identification of the organisation or practice that the healthcare provider is representing at the time of document creation.</p> <p>Traces</p> <p>Bus Req # 024624. R5-PATH-004b Bus Req # 024682. R5-DIMG-004b Bus Req # 024685. R5-DIMG-004e Bus Req # 022747. R5-DIMG-013 Bus Req # 022741. R5-DIMG-028 (9223)</p>	
Healthcare Provider's Title (optional)	023061	The document SHOULD contain at least one title for the healthcare provider.	<p>Titles such as 'Mrs', 'Mr', 'Dr' etc. are useful when communicating with the healthcare provider.</p> <p>Traces</p> <p>Bus Req # 024624. R5-PATH-004b Bus Req # 024626. R5-PATH-004e Bus Req # 023285. R5-PATH-002 Bus Req # 024685. R5-DIMG-004e Bus Req # 024682. R5-DIMG-004b</p>	

Data item	Req No.	Requirement statement	Rationale	Present in view payload
Healthcare Provider Given Name (optional)	023062	The document SHOULD contain at least one given name for the healthcare provider.	<p>To enable consistent and correct identification of the healthcare provider.</p> <p>Traces</p> <p>Bus Req # 024624. R5-PATH-004b Bus Req # 024626. R5-PATH-004e Bus Req # 023285. R5-PATH-002 Bus Req # 024685. R5-DIMG-004e Bus Req # 024682. R5-DIMG-004b</p>	Yes
Healthcare Provider Family Name (mandatory)	023064	The document SHALL contain the healthcare provider's family name.	<p>To enable consistent and correct identification of the healthcare provider. This is a required field when validating HPI-Is against the HI Service.</p> <p>Traces</p> <p>Bus Req # 024624. R5-PATH-004b Bus Req # 024626. R5-PATH-004e Bus Req # 023285. R5-PATH-002 Bus Req # 024685. R5-DIMG-004e Bus Req # 024682. R5-DIMG-004b</p>	Yes

Data item	Req No.	Requirement statement	Rationale	Present in view payload
Healthcare Provider Name Suffix (optional)	023065	The document SHOULD contain the healthcare provider's name suffix where applicable.	<p>To enable consistent and correct identification of the healthcare provider.</p> <p>Suffixes such as 'Snr', 'Jnr' etc. can be a useful aid in the correct and unique identification of the Healthcare Provider.</p> <p>Traces</p> <p>Bus Req # 024624. R5-PATH-004b Bus Req # 024626. R5-PATH-004e Bus Req # 023285. R5-PATH-002 Bus Req # 024685. R5-DIMG-004e Bus Req # 024682. R5-DIMG-004b</p>	

4 Healthcare Provider - Reporting Radiologist

The person who approves the release of the diagnostic imaging report is called the Reporting Radiologist.

4.1 PCEHR participating Healthcare Provider (core)

Data item	Req No.	Requirement statement	Rationale	Present in view payload
Healthcare Provider Identifier-Individual (mandatory)	023066	The document SHALL contain the Healthcare Provider's Individual Identifier (HPI-I).	<p>To enable consistent and correct identification of the healthcare provider.</p> <p>Traces</p> <p>Bus Req # 024626. R5-PATH-004e Bus Req # 023285. R5-PATH-002 Bus Req # 024685. R5-DIMG-004e Bus Req # 024682. R5-DIMG-004b</p>	Yes
Healthcare Provider Identifier-Organisation (mandatory)	023071	The document SHALL contain the Healthcare Provider Identifier-Organisation (HPI-O) of the organisation the healthcare provider is representing at the time of the CDA document creation.	<p>To enable consistent and correct identification of the organisation or practice that the healthcare provider is representing at the time of document creation.</p> <p>Traces</p> <p>Bus Req # 023285. R5-PATH-002 Bus Req # 024626. R5-PATH-004e Bus Req # 024685. R5-DIMG-004e Bus Req # 024682. R5-DIMG-004b</p>	Yes

Data item	Req No.	Requirement statement	Rationale	Present in view payload
Healthcare Provider's Title (optional)	023061	The document SHOULD contain at least one title for the healthcare provider.	<p>Titles such as 'Mrs', 'Mr', 'Dr' etc. are useful when communicating with the healthcare provider.</p> <p>Traces</p> <p>Bus Req # 024624. R5-PATH-004b Bus Req # 024626. R5-PATH-004e Bus Req # 023285. R5-PATH-002 Bus Req # 024685. R5-DIMG-004e Bus Req # 024682. R5-DIMG-004b</p>	
Healthcare Provider Given Name (optional)	023062	The document SHOULD contain at least one given name for the healthcare provider.	<p>To enable consistent and correct identification of the healthcare provider.</p> <p>Traces</p> <p>Bus Req # 024624. R5-PATH-004b Bus Req # 024626. R5-PATH-004e Bus Req # 023285. R5-PATH-002 Bus Req # 024685. R5-DIMG-004e Bus Req # 024682. R5-DIMG-004b</p>	Yes
Healthcare Provider Family Name (mandatory)	023064	The document SHALL contain the healthcare provider's family name.	<p>To enable consistent and correct identification of the healthcare provider. This is a required field when validating HPI-Is against the HI Service.</p> <p>Traces</p> <p>Bus Req # 024624. R5-PATH-004b Bus Req # 024626. R5-PATH-004e Bus Req # 023285. R5-PATH-002 Bus Req # 024685. R5-DIMG-004e Bus Req # 024682. R5-DIMG-004b</p>	Yes

Data item	Req No.	Requirement statement	Rationale	Present in view payload
Healthcare Provider Name Suffix (optional)	023065	The document SHOULD contain the healthcare provider's name suffix where applicable.	<p>To enable consistent and correct identification of the healthcare provider.</p> <p>Suffixes such as 'Snr', 'Jnr' etc. can be a useful aid in the correct and unique identification of the Healthcare Provider.</p> <p>Traces</p> <p>Bus Req # 024624. R5-PATH-004b Bus Req # 024626. R5-PATH-004e Bus Req # 023285. R5-PATH-002 Bus Req # 024685. R5-DIMG-004e Bus Req # 024682. R5-DIMG-004b</p>	

4.2 Healthcare Provider (extension)

Data item	Req No.	Requirement statement	Rationale	Present in view payload
Healthcare Provider Individual's Workplace Address (optional)	024035	The document SHOULD contain the healthcare provider individual's Australian workplace address.	<p>To enable consistent and correct identification of the healthcare provider.</p> <p>Traces</p> <p>Bus Req # 022741. R5-DIMG-028 (9223)</p>	

Data item	Req No.	Requirement statement	Rationale	Present in view payload
Healthcare Provider Individual's Workplace Electronic Communication Details (optional)	024036	<p>The document SHOULD contain at least one set of electronic communication details for the workplace of the individual. These include (but are not limited to) telephone numbers, mobile phone numbers, email addresses etc.</p> <p>Additional Notes</p> <p>A healthcare provider may work for more than one organisation. The communication details are for the organisation the healthcare provider is representing at that point in time. These are the workplace communication details of the individual - not the organisation.</p>	<p>To enable electronic communication with the healthcare provider.</p> <p>Traces</p> <p>Bus Req # 022741. R5-DIMG-028 (9223)</p>	

5 CDA Document Author

The CDA document author is the individual responsible for the creation of the CDA document.

Data item	Req No.	Requirement statement	Rationale	Present in view payload
Healthcare Provider Organisation Name (mandatory)	023070	The document SHALL contain the name of the organisation the healthcare provider is representing at the time of CDA document creation.	<p>To enable consistent and correct identification of the healthcare provider organisation. This is a required field when validating HPI-Os against the HI Service.</p> <p>Traces</p> <p>Bus Req # 024624. R5-PATH-004b Bus Req # 024626. R5-PATH-004e Bus Req # 023285. R5-PATH-002 Bus Req # 024682. R5-DIMG-004b</p>	Yes
Healthcare Provider Professional Role (mandatory)	024040	The document SHALL contain the healthcare provider's professional role (e.g. General Practitioner). This data item MAY carry a value equivalent to 'unknown'.	<p>Describing the professional role a healthcare provider is acting in the provision of healthcare can provide context and assist in interactions between healthcare providers to the benefit of individuals receiving healthcare.</p> <p>Traces</p> <p>Bus Req # 023285. R5-PATH-002 Bus Req # 022732. R5-DIMG-002</p>	Yes

5.1 PCEHR participating Healthcare Provider (core)

Data item	Req No.	Requirement statement	Rationale	Present in view payload
Healthcare Provider Identifier-Individual (mandatory)	023066	The document SHALL contain the Healthcare Provider's Individual Identifier (HPI-I).	<p>To enable consistent and correct identification of the healthcare provider.</p> <p>Traces</p> <p>Bus Req # 024626. R5-PATH-004e Bus Req # 023285. R5-PATH-002 Bus Req # 024685. R5-DIMG-004e Bus Req # 024682. R5-DIMG-004b</p>	Yes
Healthcare Provider Identifier-Organisation (mandatory)	023071	The document SHALL contain the Healthcare Provider Identifier-Organisation (HPI-O) of the organisation the healthcare provider is representing at the time of the CDA document creation.	<p>To enable consistent and correct identification of the organisation or practice that the healthcare provider is representing at the time of document creation.</p> <p>Traces</p> <p>Bus Req # 023285. R5-PATH-002 Bus Req # 024626. R5-PATH-004e Bus Req # 024685. R5-DIMG-004e Bus Req # 024682. R5-DIMG-004b</p>	Yes
Healthcare Provider's Title (optional)	023061	The document SHOULD contain at least one title for the healthcare provider.	<p>Titles such as 'Mrs', 'Mr', 'Dr' etc. are useful when communicating with the healthcare provider.</p> <p>Traces</p> <p>Bus Req # 024624. R5-PATH-004b Bus Req # 024626. R5-PATH-004e Bus Req # 023285. R5-PATH-002 Bus Req # 024685. R5-DIMG-004e Bus Req # 024682. R5-DIMG-004b</p>	

Data item	Req No.	Requirement statement	Rationale	Present in view payload
Healthcare Provider Given Name (optional)	023062	The document SHOULD contain at least one given name for the healthcare provider.	<p>To enable consistent and correct identification of the healthcare provider.</p> <p>Traces</p> <p>Bus Req # 024624. R5-PATH-004b Bus Req # 024626. R5-PATH-004e Bus Req # 023285. R5-PATH-002 Bus Req # 024685. R5-DIMG-004e Bus Req # 024682. R5-DIMG-004b</p>	Yes
Healthcare Provider Family Name (mandatory)	023064	The document SHALL contain the healthcare provider's family name.	<p>To enable consistent and correct identification of the healthcare provider. This is a required field when validating HPI-Is against the HI Service.</p> <p>Traces</p> <p>Bus Req # 024624. R5-PATH-004b Bus Req # 024626. R5-PATH-004e Bus Req # 023285. R5-PATH-002 Bus Req # 024685. R5-DIMG-004e Bus Req # 024682. R5-DIMG-004b</p>	Yes

Data item	Req No.	Requirement statement	Rationale	Present in view payload
Healthcare Provider Name Suffix (optional)	023065	The document SHOULD contain the healthcare provider's name suffix where applicable.	<p>To enable consistent and correct identification of the healthcare provider.</p> <p>Suffixes such as 'Snr', 'Jnr' etc. can be a useful aid in the correct and unique identification of the Healthcare Provider.</p> <p>Traces</p> <p>Bus Req # 024624. R5-PATH-004b Bus Req # 024626. R5-PATH-004e Bus Req # 023285. R5-PATH-002 Bus Req # 024685. R5-DIMG-004e Bus Req # 024682. R5-DIMG-004b</p>	

5.2 Healthcare Provider (extension)

Data item	Req No.	Requirement statement	Rationale	Present in view payload
Healthcare Provider Individual's Workplace Address (optional)	024035	The document SHOULD contain the healthcare provider individual's Australian workplace address.	<p>To enable consistent and correct identification of the healthcare provider.</p> <p>Traces</p> <p>Bus Req # 022741. R5-DIMG-028 (9223)</p>	

Data item	Req No.	Requirement statement	Rationale	Present in view payload
Healthcare Provider Individual's Workplace Electronic Communication Details (optional)	024036	<p>The document SHOULD contain at least one set of electronic communication details for the workplace of the individual. These include (but are not limited to) telephone numbers, mobile phone numbers, email addresses etc.</p> <p>Additional Notes</p> <p>A healthcare provider may work for more than one organisation. The communication details are for the organisation the healthcare provider is representing at that point in time. These are the workplace communication details of the individual - not the organisation.</p>	<p>To enable electronic communication with the healthcare provider.</p> <p>Traces</p> <p>Bus Req # 022741. R5-DIMG-028 (9223)</p>	

6 Document control (core)

Data item	Req No.	Requirement statement	Rationale	Present in view payload
Document Version Number (mandatory)	023068	<p>The document SHALL contain the document version number.</p> <p>Additional Notes</p> <p>This is the CDA document version number that is recognised by the PCEHR.</p>	<p>The version number differentiates each instance of a document from its predecessors and successors.</p> <p>Traces</p> <p>Bus Req # 023285. R5-PATH-002 Bus Req # 022732. R5-DIMG-002</p>	
Document Instance Identifier (mandatory)	023067	<p>The document SHALL contain a globally unique identifier for each document instance.</p>	<p>Required to uniquely identify a document instance.</p> <p>Traces</p> <p>Bus Req # 023285. R5-PATH-002 Bus Req # 022732. R5-DIMG-002</p>	Yes
Template identifier (mandatory)	023069	<p>The document SHALL contain at least one identifier of a template that the document conforms to.</p>	<p>The template identifiers identify the specific templates the CDA document conforms to.</p> <p>These identifiers may be used by systems to validate the document.</p> <p>Traces</p> <p>Bus Req # 023285. R5-PATH-002 Bus Req # 022732. R5-DIMG-002</p>	

Data item	Req No.	Requirement statement	Rationale	Present in view payload
Date and time of document creation (mandatory)	024025	The document SHALL contain the date and time the CDA document instance was generated.	<p>The date and time a document was created enables effective document provenance and management.</p> <p>Traces</p> <p>Bus Req # 023285. R5-PATH-002 Bus Req # 022732. R5-DIMG-002</p>	Yes
Document type (mandatory)	024027	The document SHALL contain a unique identifier that specifies the document type.	<p>The identification of the document type (e.g. a unique identifier referencing 'Discharge Summary') may be of value in categorising the various document types for display in the PCEHR portals, Views and clinical information systems.</p> <p>Traces</p> <p>Bus Req # 023285. R5-PATH-002 Bus Req # 022732. R5-DIMG-002</p>	Yes

7 Domain Specific - Diagnostic Imaging

Data item	Req No.	Requirement statement	Rationale	Present in view payload
Request Date and Time (mandatory)	022886	The document SHALL contain the date and time (time where available) the service request was made.	<p>This provides a point in time reference within the eHealth record that the clinician may refer to, and may offer a point in time reference for associating the request data to the result data.</p> <p>Traces</p> <p>Bus Req # 024682. R5-DIMG-004b</p>	Yes
Request Identifier (optional)	022884	<p>The document SHOULD contain the request ID the report relates to.</p> <p>Additional Notes</p> <p>This is the request ID optionally provided by the requesting healthcare provider. The requesting healthcare provider is not obliged to provide a request identifier.</p>	<p>Including the request ID assists in quick document retrieval, auditing and document management activities.</p> <p>Traces</p> <p>Bus Req # 024682. R5-DIMG-004b</p>	
Accession Number (mandatory)	022557	<p>The document SHALL contain the same accession number as that displayed in the attached PDF report. The document SHALL permit the use of alphanumeric (letters and numbers) and special characters (- / . #, * etc.).</p> <p>Additional Notes</p> <p>This field can be used by the service provider in a manner that is consistent with their software and processes. It is a local identifier assigned to a report by the image provider but may not be globally unique without further manipulation.</p>	<p>Storing the accession number assists in quick document retrieval and ensuring the attached PDF is correct for the CDA document.</p> <p>Traces</p> <p>Bus Req # 024683. R5-DIMG-004c</p>	Yes

Data item	Req No.	Requirement statement	Rationale	Present in view payload
Report Completion Date and Time (mandatory)	023100	The document SHALL record the date and time (where time is available) the report was completed. The time component is optional for the CDA document author to provide.	The date/time a report was released may carry clinical relevance. Traces Bus Req # 024683. R5-DIMG-004c	
Report status (mandatory)	023107	The document SHALL record the report status associated with the attached report. There SHALL be at most one report status and the status SHALL be coded using a value from the HL7 2.x 0123 Result Status table.	To inform the requester or receiver of the report whether a report is final or there is more to expect, or if amendments have been made. This provides relevant status information for the clinician to decide if the report can be acted upon. Traces Bus Req # 024683. R5-DIMG-004c	
Report Description (mandatory)	024047	The document SHALL contain the report description. Additional Notes The report description may be the simple concatenation of all the exam names within the report.	Describing the report and contents helps viewers to locate reports and exams within reports. Traces Bus Req # 024683. R5-DIMG-004c	Yes
Single PDF Attachment (mandatory)	022556	The document SHALL contain a single report as an attachment in PDF format.	The PDF representation of the report is the only means of accessing the full and complete report via the PCEHR. Traces Bus Req # 022735. R5-DIMG-007	

Data item	Req No.	Requirement statement	Rationale	Present in view payload
Modality (mandatory)	022562	The document SHALL store the modality of the diagnostic examination. There SHALL be one or more modalities per CDA document but only one modality per examination.	<p>The modality will record a description of the diagnostic imaging modality applied. For example, this value may represent X-ray, CT scan, MRI etc.</p> <p>Traces</p> <p>Bus Req # 024684. R5-DIMG-004d</p>	
Examination Procedure (mandatory)	022558	<p>The document SHALL contain the details of the diagnostic imaging examination.</p> <p>Additional Notes</p> <p>May also be called 'examination description'.</p>	<p>Procedures or descriptions of examinations employed to produce a diagnostic image can be recorded here if applicable.</p> <p>Traces</p> <p>Bus Req # 024684. R5-DIMG-004d</p>	
Anatomical Location (optional)	022563	<p>The document SHOULD record details about the anatomical location to which this examination result refers.</p> <p>There may be one or more anatomical locations for each examination.</p> <p>Additional Notes</p> <p>May refer to an organ or specific structures within the body, often using medical language.</p>	<p>Diagnostic images often apply to a specific anatomical location. This location can be recorded here if applicable.</p> <p>A single examination may span multiple anatomical locations. For example, a single exam or set of images may be for a foot and ankle. This would constitute two anatomical locations for the one examination.</p> <p>The user would be expected to ensure the anatomical location specified in the CDA metadata reflects the anatomical location(s) presented in the image(s).</p> <p>Traces</p> <p>Bus Req # 024684. R5-DIMG-004d</p>	Yes

Data item	Req No.	Requirement statement	Rationale	Present in view payload
Anatomical Region (optional)	022745	<p>The document SHOULD contain the details about the anatomical region or part of the body to which the examination result refers. There SHALL be at most one anatomical region.</p> <p>Additional Notes</p> <p>Anatomical Region entries are restricted to the following values:</p> <p>HEAD, NECK, CHEST, CARDIAC, BREAST, ABDOMEN, PELVIS, UPPER LIMB, LOWER LIMB, CERVICAL SPINE, THORACIC SPINE, LUMBAR SPINE, WHOLE BODY.</p>	<p>Diagnostic images often apply to a general anatomical region. This region can be recorded here if applicable.</p> <p>A single examination is performed on a single anatomical region. For example, a single exam or set of images may be on 'Lumbar Spine' or 'Whole Body'.</p> <p>The user would be expected to ensure the anatomical region specified in the CDA metadata reflects the anatomical region presented in the image(s).</p>	
Region distinction (mandatory)	022868	The document SHALL be able to distinguish between anatomical region and anatomical location.	It is important for clinicians to understand whether provided metadata is associated with a region or location.	
Imaging Date and Time (mandatory)	022560	The document SHALL record the date and time (time where time is available) of the examination. There can be multiple examination date/times within the CDA document but only one date/time per examination.	<p>The exam date/time is important metadata that should be recorded for every examination.</p> <p>A CDA document or PDF report may have multiple examinations conducted over multiple days/times. Each exam will record a date/time.</p> <p>Traces</p> <p>Bus Req # 024684. R5-DIMG-004d</p>	

Data item	Req No.	Requirement statement	Rationale	Present in view payload
Region Laterality (optional)	022869	<p>The document SHOULD record details about the region laterality to which the examination result refers where laterality is applicable.</p> <p>There MAY be at most one laterality for each examination.</p>	<p>The laterality can be recorded here as additional information for the report reviewer and will represent values such as left, right, centre etc.</p> <p>Regardless of the anatomical location(s), there may be at most one laterality per examination.</p>	
Anatomical Site Laterality (optional)	022559	<p>The document SHOULD record details about the site laterality to which the examination result refers site where laterality is applicable.</p> <p>There MAY be at most one laterality for each examination.</p> <p>Additional Notes</p> <p>It is preferable that the region and site laterality do not conflict but acknowledge it is the responsibility of the document author to ensure this integrity.</p>	<p>The anatomical site laterality provided by the reporting radiologist/document author should be the same laterality as the body region.</p> <p>Traces</p> <p>Bus Req # 024684. R5-DIMG-004d</p>	
URI of image set location (optional)	022561	<p>The document SHOULD store one URI per examination referencing the externally hosted diagnostic images.</p> <p>Additional Notes</p> <p>Where a URI is not available, additional narrative might be included stating a phone number or other contact details for further enquiry.</p>	<p>Providing the URI or information about how to get access to the externally hosted image gives the viewer the opportunity to view images hosted external to the CDA document.</p> <p>Traces</p> <p>Bus Req # 024684. R5-DIMG-004d</p>	

8 Entity relationship diagram

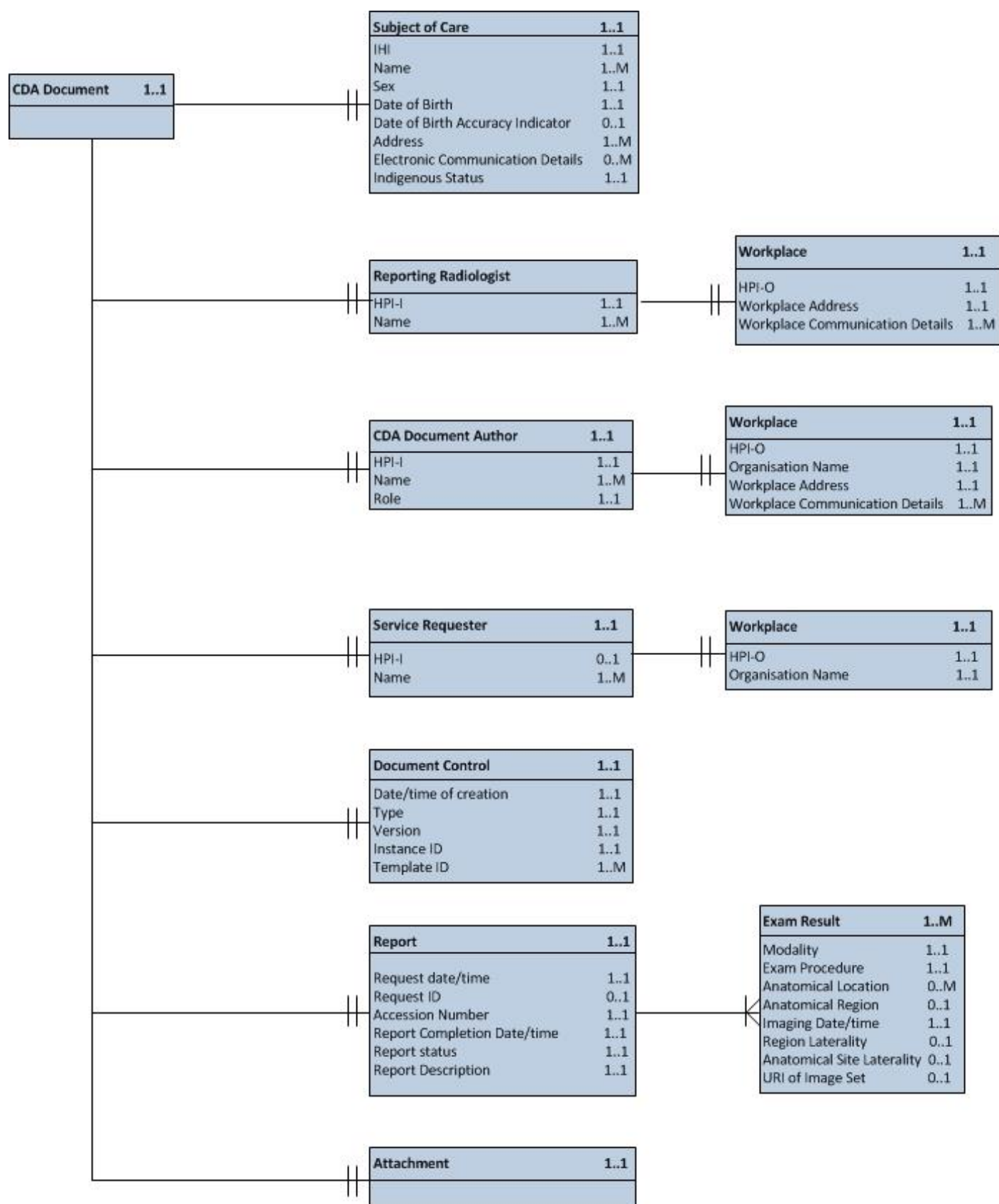


Figure 1: Diagnostic imaging relationship

9 Sample

The example below represents a conceptual view of the information requirements contained in this document. This is intended to be an example only to assist with understanding and review and is not intended to be incorporated into any implementation design or technical specification.

Diagnostic Imaging Report			
Smith, John Anderson		DOB 10 Oct 1953 (60y*)	Sex Male IHI 8003 6080 0002 2113
Start of document			
Patient Name: Smith, John Anderson Sex: Male Date of Birth: 10-10-1953 IHI: 8003 6080 0002 2113 Address: 22 Antler Way, SA, 5555 Document type: Diagnostic Imaging Report Document ID: 2.25.26355015654855775		CDA Document author Organisation: National Scanners Inc. HPI-O: 8003 6286 2341 0201 Document author: Henderson, Jan HPI-I: 8003 6145 8457 6521 Document version: 1 Template ID: 1.2.36.1.2001.1001.100.1002.222	
Diagnostic Imaging Report <div> <div> Request Organisation: Aust. Radiologists HPI-O: 8003 6245 4537 4030 Requested by: Dr Jim Stiles HPI-I: 8003 6145 4568 1004 Request number: 375-A Request date: 30-Aug-2013 Report ID: 464221 Report status: Final Report release date: 11-Oct-2013 </div> <div> Uploader Organisation: National Scanners Inc. HPI-O: 8003 6286 2341 0201 Author: Henderson, Jan HPI-I: 8003 6145 8457 6521 LSPN: 9E+06 </div> </div>			
Diagnostic Examination			
Modality: CT Scan Anatomical location: Chest Anatomical location: Abdomen URI: http://reports.di.com.au/images.htm?id=1111		Laterality: N/A Imaging date: 30-Aug-2013 Procedure: High resolution chest	
Modality: CT Scan Anatomical location: Shoulder URI: http://reports.di.com.au/images.htm?id=2222		Laterality: Left Imaging date: 30-Aug-2013 Procedure: Joint injection	
Modality: X-Ray Anatomical location: Shoulder URI: http://reports.di.com.au/images.htm?id=3333		Laterality: Right Imaging date: 31-Aug-2013 Procedure: N/A	
Modality: X-Ray Anatomical location: Elbow Anatomical location: Wrist Anatomical location: Abdomen URI: http://reports.di.com.au/images.htm?id=4444		Laterality: Left Imaging date: 31-Aug-2013 Procedure: N/A	
<<Link to PDF document>>			

Figure 2 - Example report

10 Diagnostic imaging report scenarios

The following scenarios explain the context in which a diagnostic imaging report and related images might relate to a subject of care. These scenarios are not exhaustive, however, and offer context only when authorisation to post has been captured.

Case	Description
1	<p>Gregory Johnson visits his GP as he has an abnormal lump on his wrist. The GP directs Gregory directly to a radiologist for X-rays of his wrist.</p> <p>Gregory is provided with a paper request outlining the requested service. Because the GP's clinical information system knows Gregory has a PCEHR, and has standing consent, the paper request form has a tick in the 'upload results to the PCEHR' checkbox.</p> <p>The radiologist records this in their own system when Gregory presents, and this ensures the X-ray report is automatically uploaded to Gregory's PCEHR.</p>
2	<p>Marge Brook sees her GP about persistent joint pain. During the consultation, the GP decides to refer Marge to a specialist and helps Marge make the appointment.</p> <p>Marge sees the specialist, who asks Marge to make an appointment with a radiologist.</p> <p>The specialist is not a PCEHR participant but consults with Marge about her results being uploaded to the PCEHR. Marge does not want the results to be uploaded, so the specialist ticks the 'do not upload results to the PCEHR' checkbox.</p> <p>The radiologist performs the requested exam and sends the electronic report back to the specialist. The report is not uploaded to the PCEHR.</p>

Acronyms

This table lists abbreviations and acronyms in alphabetical order.

Acronym	Description
CDA	Clinical Document Architecture
CIS	clinical information system
GP	general practitioner
PCEHR	personally controlled electronic health record

Glossary

Term	Meaning
Clinical Document Architecture (CDA)	An XML-based mark-up standard intended to specify the encoding, structure and semantics of clinical documents for exchange. CDA is an ANSI-certified standard from Health Level Seven International (HL7).
document instance identifier	A globally unique identifier that, when combined with a document version, uniquely identifies each CDA document. Sometimes called a 'unique document identifier'.
Individual Healthcare Identifier – Individual (IHI)	A unique 16-digit number that identifies individuals within Australia who receive healthcare.
Healthcare Provider Identifier – Individual (HPI-I)	A unique 16-digit unique number used to identify providers who deliver healthcare in the Australian healthcare setting.
Healthcare Provider Identifier – Organisation (HPI-O)	A unique 16-digit unique number used to identify organisations who deliver care in the Australian healthcare setting.
MAY	When appearing in an information requirement, the verb MAY indicates an optional requirement.
non-PCEHR participant	A healthcare provider that is not connected to the PCEHR and may not have, or may not know, their HPI-O/HPI-I.
Present in View Payload	This indicates if the attribute will be provided by the PCEHR in any view requested by a CIS. This does not indicate it will be available in the CIS user interface, report or clinical document – only that it is provided in the view payload.
request	Request initiated and generated by a <i>Requesting Healthcare Professional</i> such as a GP or a specialist then fulfilled by a patient-determined service provider.
SHALL	When appearing in an information requirement, the verb SHALL indicates a mandatory requirement. Its negative form SHALL NOT indicates a prohibition.
SHOULD	When appearing in an information requirement, the verb SHOULD indicates a recommendation. Its negative form SHOULD NOT indicates an option that is not recommended.
standing consent	Allows treating healthcare providers to upload health information about patients to their eHealth record. Healthcare providers are permitted to assume patient consent unless the patient expressly and unambiguously removes their standing consent.