

# Clinical Package Validator User Guide

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# Table of contents

1	Intro	duction		6
	1.1	Purpose		6
	1.2	Intended	audience	6
	1.3	Scope		6
	1.4	Overview	/	6
2	Tests	performe	d by the Validator	7
	2.1	Package	validation	7
		2.1.1	Package requirements	7
		2.1.2	Assessing a clinical package using the Validator	8
		2.1.3	Limitations of package validation	8
	2.2	Template	e validation	9
		2.2.1	Limitations of validation by My Health Record templates.	.10
	2.3	Code vali	dation	.11
		2.3.1	Reference set validation	.12
		2.3.2	Case significance	.13
		2.3.3	Limitations of code validation	.13
	2.4	XDS Met	adata validation	.14
	2.5	Other lin	nitations of the Validator	.14
3	Using	the Valid	ator	.15
	3.1	Validator	menus	.15
		3.1.1	File menu	.15
		3.1.2	Configuration menu	.15
		3.1.3	Help menu	.17
	3.2	Validator	parameters	.17
		3.2.1	File parameter	.18
		3.2.2	Template parameter	.21
		3.2.3	Addn Rules parameter	.22
		3.2.4	Context parameter	.25
	3.3	Conform	ance levels	.25
		3.3.1	Conformance level 1A	.26
		3.3.2	Conformance level 1B	.27
		3.3.3	Conformance level 2	.28
		3.3.4	Conformance level 3A	.29
		3.3.5	Conformance level 3B	.29
	3.4	Configura	ation and runtime information	.30
	3.5	Run Conf	ormance command	.32
	3.6	Run Addı	n Rules Only command	.32
	3.7	Validatio	n results	.33
		3.7.1	Information tab	.33
		3.7.2	Rendered Document tab	.33
		3.7.3	Sign File tab	.34
		3.7.4	Sign File Information tab	.35

		3.7.5	Template Validation Report tab	38
		3.7.6	Additional Rules Report tab	42
		3.7.7	Package Report tab	42
		3.7.8	Reference Sets tab	44
		3.7.9	Other Terminology Aspects tab	46
	3.8	Override	Results command	46
	3.9	Show Re	port command	47
	3.10	Cumulati	ive report of test results	49
	3.11	Load and	l Validate XDS Metadata	51
4	Exam	ples of va	lidation	53
	4.1	Validate	a 3A eReferral clinical package, My Health Record	context.53
		4.1.1	View information about the eSignature file	56
		4.1.2	Display template validation results	58
		4.1.3	Display package validation results	59
		4.1.4	Display code validation results	59
		4.1.5	Generate a test report	60
	4.2	Examples	s of code validation	62
		4.2.1	Australian Vaccine code error	62
		4.2.2	ANZSCO code error	62
		4.2.3	Australian PBS item code error	63
		4.2.4	Health Care Facility Type code error	63
		4.2.5	Valid Australian Vaccine code	63
		4.2.6	SNOMED CT-AU display name error	64
		4.2.7	Valid omission of a code	64
		4.2.8	SNOMED CT-AU code error	65
5	Batch	validatio	n	66
	5.1	Using the	e command line interface	66
	5.2	Analysin	g validation results	69
Acron	ıyms			71
Gloss	ary			72
Refer	ences.			73

# 1 Introduction

## 1.1 Purpose

This document is a guide for developers and testers ("users") who use the Clinical Package Validator ("the Validator") to test whether their healthcare software system is producing clinical packages and documents that conform to the relevant specifications for the document type.

To the extent users wish to use the Validator to test conformance, users should not rely on the Validator alone to determine conformance, and independent testing will be required. The Validator is a tool to assist users only. The Validator does not test all conformance specifications and users should carefully read the *Clinical Package Validator Product Data Sheet*. For further guidance, contact the Agency Help Centre on 1300 901 001 or help@digitalhealth.gov.au.

## 1.2 Intended audience

This document is intended for:

- testers who use the Validator to assess whether their healthcare software system produces clinical documents and clinical packages that conform to the relevant specifications; and
- developers who use the Validator to provide quick feedback for software development.

## 1.3 Scope

This document describes the use of the Validator to test:

- whether the syntax and structure of a clinical document are conformant with specifications, and
- whether codes within a clinical document can be found in code systems supported by the Validator.

It also describes how the Validator can be used to validate certain clinical packages and an HL7 Medical Document Management (MDM) wrapped clinical package.

## 1.4 Overview

The Validator is a tool for testing whether a healthcare software system is producing certain (but not all) clinical documents that conform to the relevant document CDA implementation guide, structured content specification, and the My Health Record conformance profile specification.

In addition, the Validator tests certain (but not all) codes in clinical documents, and tests clinical packages to determine whether they conform to the packaging specifications.

The Validator does not test all conformance specifications and users should carefully read the *Clinical Package Validator Product Data Sheet* to determine what the Validator cannot be used for, and for further guidance contact the Agency on 1300 901 001 or <u>help@digitalhealth.gov.au</u>.

# 2 Tests performed by the Validator

The Validator performs the following tests:

- package validation;
- template validation;
- code validation; and
- XDS metadata validation.

It can be used to assist a vendor testing the following types of files:

- a clinical document;
- a clinical package containing a clinical document, eSignatures, and other documents (e.g. attachments); and
- an HL7 MDM wrapped clinical package containing a clinical document.

Please refer to the *Clinical Package Validator Product Data Sheet* for further details of tests in scope.

## 2.1 Package validation

## 2.1.1 Package requirements

The clinical package requirements describe how to construct a conformant ZIP file containing a clinical document, create and include eSignatures, and properly reference attachments from that clinical document.

The requirements for a clinical package are described in the CDA Package specification [NEHTA2011a] and the *Clinical Documents - Common Conformance Profile* [NEHTA2015c]. Requirements for referencing attachments are listed in the *CDA Package Specification* [NEHTA2011a], *CDA Rendering Specification* [NEHTA2012a], and the *Clinical Documents - Common Conformance Profile* [NEHTA2015c].

Additional requirements for clinical packages apply, depending on whether the My Health Record (MHR) or provider to provider (P2P) context is selected by the user. The *PCEHR Document Exchange Service Logical Service Specification* [NEHTA2014b] and the *PCEHR Document Exchange Service Technical Service Specification* [NEHTA2014c] list requirements that apply to clinical packages sent to the My Health Record system (referred to as the My Health Record context). Requirements for clinical packages sent from one healthcare provider to another healthcare provider (referred to as the P2P context) are listed in the *P2P Document Delivery Technical Service Specification* [NEHTA2012b].

The P2P context imposes fewer constraints on a clinical package than the My Health Record context. For example, a general practitioner may attach a report from a pathology laboratory to an eReferral that is to be sent to a specialist. If, however, the eReferral is to be sent to the My Health Record system, the general practitioner cannot attach the pathology report to the eReferral, because only the author of a document can upload that document to the My Health Record system.

## 2.1.2 Assessing a clinical package using the Validator

To determine whether a clinical package conforms to some packaging requirements, the Validator applies a non-exhaustive set of tests. The tests that are applied will depend on whether the user has selected the My Health Record or P2P context (Section 3.2.4) and on whether the Validator is able to perform the tests. You should refer to the *Clinical Package Validator Product Data Sheet* or contact the Agency Help Centre on 1300 901 001 or <u>help@digitalhealth.gov.au</u> to confirm that the Validator may be used to carry out the required tests. If the user selects the My Health Record context, only the set of tests for the My Health Record context is applied. Similarly, if the P2P context is selected, only the set of tests for the P2P context is applied.

Some of the clinical package test cases applied by the Validator for both the My Health Record and P2P contexts are described in the *Conformance Test Specification for CDA Packaging* [NEHTA2015b].

## 2.1.3 Limitations of package validation

The package validation function of the Validator has the following limitations:

- 1 In both the My Health Record and P2P contexts:
  - a The tests that are applied to an attachment to a clinical document do not work if the attachment is compressed.
  - b The Validator checks the dates and times within a Public Key Infrastructure (PKI) certificate to make sure that the certificate was valid when it was used to sign a clinical document. It does not, however, check whether the certificate was on the revocation list when the clinical document was signed.
  - c The Validator does not check whether national healthcare identifiers in the eSignature are registered in the national healthcare identifier service. Nor does it determine whether there is any relationship between the identifier for the approver, the identifier in the certificate, and the identifiers in the clinical document.
  - d Some types of clinical documents may contain a reference to a file (e.g. an image) on a network location such as a website. The Validator does not verify the value of the integrityCheck attribute that may be associated with such a reference.<sup>1</sup>
- 2 In the P2P context:
  - a Package validation tests are not applied to an attachment to a clinical document if that attachment is a clinical package. In this case, the tester must extract the attachment from the clinical package and manually apply the Validator to it.
  - b The tests that are applied to an attachment to a clinical document do not work if the attachment and clinical document are in different folders.
  - c A clinical package may contain multiple eSignature files; typically, one for each person who approved the clinical document and the clinical information within it. The primary eSignature file has the filename CDA\_SIGN.XML and this is the only eSignature validated by the Validator. The Validator will report if it finds other eSignatures, but it will not validate them.

<sup>&</sup>lt;sup>1</sup> To perform this verification, a tester may access tools or websites that apply the SHA-1 calculation to the referenced file. It is important to note that the Agency's specifications require the inclusion of the integrity check value in a base64 format rather than in a hexadecimal format.

d A clinical package may contain a package index, but the Validator does not examine the package index when validating a clinical package.

## 2.2 Template validation

The Validator can apply two templates to a clinical document:

- 1 a My Health Record template which is applied by the My Health Record system to a clinical document uploaded to it; and
- 2 an additional template containing additional validation rules.

A My Health Record template exists for each type of clinical document at each level of conformance. When a clinical document is being validated, the Validator will apply the template that the user has decided is relevant to that document including user-generated templates.

An additional template containing additional validation rules may also be applied if additional quality criteria apply in a particular context.

My Health Record templates may be obtained from a number of sources:

- template package libraries published on the Agency website<sup>2</sup>, which contain a set of clinical document template packages; and
- template packages included in the My Health Record software vendor test environment.

Additional template packages are available from the Agency.

A template consists of the Australian CDA schema and Schematron rules. The Australian CDA schema constrains the set of data elements that may be used in a clinical document. The Australian CDA schema also contains rules that define the data types that are allowed for a data element, their attributes, and the allowed parent/child relationships. Schema rules are not specific to a type of clinical document or a conformance level, but are derived from the *HL7 Clinical Document Architecture, Release 2.0* specification [HL72004] and the *Australian CDA Schema Extension* [NEHTA2014a].

Schematron is a rule-based validation language that is capable of expressing constraints that cannot be expressed in a CDA schema. My Health Record templates contain Schematron rules developed for each type of clinical document at each level of conformance. These rules describe the required cardinality of data elements in a clinical document and the relationships between these data elements. They also check whether a data element value is an allowed value.

Schematron rules are derived from the My Health Record conformance profile for each type of clinical document, the relevant structured content specification, the relevant CDA implementation guide, and specifications referred to by these documents.

The Validator applies template validation to the following:

- Clinical documents created by clinical information systems and contracted service provider systems, such as:
  - birth details, child parent questionnaires, consumer entered achievements, consumer entered measurements, discharge summaries, eHealth diagnostic imaging reports, eHealth dispense records, eHealth pathology reports, eHealth prescription records, eReferrals, event summaries, health check assessments, shared health summaries, and specialist letters.

<sup>&</sup>lt;sup>2</sup> These can be derived from the relevant clinical document end product at <u>http://www.digitalhealth.gov.au/implementation-resources/clinical-documents</u>.

- Clinical documents created by consumer portals, such as:
  - advance care directive custodian documents, personal health notes, and personal health summaries.
- Clinical documents created by Medicare repositories, such as:
  - Australian immunisation register reports, Australian organ donor register reports, Medicare Department of Veterans' Affairs (DVA) benefits reports, and pharmaceutical benefits reports.
- Clinical documents created by the My Health Record system, such as:
  - eHealth prescription and dispense views, health check schedule views, Medicare overviews, and observation views.

## 2.2.1 Limitations of validation by My Health Record templates

The My Health Record template validation function of the Validator has a number of limitations. These are listed in detail in the *Clinical Package Validator Product Data Sheet*.

Broadly speaking, the following high-level limitations apply:

- 1 My Health Record templates published by the Agency have been developed for My Health Record requirements rather than P2P requirements. If the P2P context is selected and the Validator reports that the clinical document references attachments of a disallowed type, the template error message may be ignored because the error message only applies to the My Health Record context.
- 2 My Health Record template validation only checks whether the minimum requirements for a conformance level have been met. No checks are applied to those data elements in a clinical document that are not required for that conformance level. For example, because the body of a conformance level 2 document need not contain structured data, the template for a level 2 document does not contain any checks for structured data. The Validator will ignore any structured data that may be present in a document that is being assessed for level 2 conformance. To assess this structured data, a template for level 3A conformance may be applied by the Validator, even though the document is only being assessed for level 2 conformance.
- 3 Extensions to a clinical document are only subjected to Australian CDA schema checks. The My Health Record templates contain no Schematron rules for these extensions. Extensions may be additional sections or data elements that have not been defined in the relevant CDA implementation guide. A clinical document may also be extended by incorporating information from any detailed clinical model published by the Agency.
- 4 My Health Record templates do not include rules for every conformance requirement listed in the specifications. They are only an aid for assessing the conformance of clinical documents. Validation using My Health Record templates must be accompanied by manual inspection of clinical documents and the application of the relevant conformance test specification for the selected type of clinical document.

An additional template with additional rules developed by the user may be applied to assist a user in overcoming these limitations.

## 2.3 Code validation

Terminology codes from code systems that are static and small in size (e.g. types of telecommunication address) are validated during template validation; whereas codes from code systems that are regularly updated or are large in size may be validated during code validation.

The Validator checks each code system identifier in a clinical document to determine whether it is one of the code system identifiers listed in Table 1. It then determines whether the associated code and display name are present in the relevant code system, and if the code system name has the expected value.

Code system name	Code system identifier
Australian Medicines Terminology (AMT) version 3	2.16.840.1.113883.6.96
Australian Medicines Terminology (AMT) version 2	1.2.36.1.2001.1004.100
Australian and New Zealand Standard Industrial Classification (ANZSIC)	1.2.36.1.2001.1005.47
Australian and New Zealand Standard Classification of Occupations (ANZSCO)	2.16.840.1.113883.13.62
Australian Vaccines codes	1.2.36.1.2001.1005.17
Clinical specialty codes	2.16.840.1.113883.3.879.329673
HL7 identifier types	2.16.840.1.113883.12.203
HL7 service delivery role types	2.16.840.1.113883.1.11.17660
PBS Item codes	1.2.36.1.2001.1005.22
PBS Manufacturer codes	1.2.36.1.2001.1005.23
Systematized Nomenclature of Medicine - Clinical Terms Australian Release (SNOMED CT-AU)	2.16.840.1.113883.6.96
PBS Item codes	1.2.36.1.2001.1005.22
PBS Manufacturer codes	1.2.36.1.2001.1005.23
Systematized Nomenclature of Medicine - Clinical Terms Australian Release (SNOMED CT-AU)	2.16.840.1.113883.6.96

### Table 1 - Code systems supported by the Validator

The Validator validates primary codes and translated codes for all conformance levels<sup>3</sup>, thereby looking up and validating every code in a clinical document that belongs to the code systems listed in Table 1.

<sup>&</sup>lt;sup>3</sup> The code system used by a health software system is considered the primary code system. If the primary code system is mapped to another code system, a code from the second code system is called a translation and may be included in a clinical document.

## 2.3.1 Reference set validation

CDA implementation guides for clinical document types specify reference sets for some of the coded fields. Reference sets are subsets of codes applicable to particular usage contexts.

In addition to the generic validation of codes against code sets (see section 2.3), the Validator performs additional validation against reference sets where these are specified in the CDA implementation guide of the particular document type.

Table 2 lists the code systems for which reference sets are currently available.

Table 2 - Code systems with additional validation against reference sets

Code system name	Code system identifier
Systematized Nomenclature of Medicine - Clinical Terms Australian Release (SNOMED CT-AU)	2.16.840.1.113883.6.96
Australian Medicines Terminology (AMT) version 3	2.16.840.1.113883.6.96
Australian Medicines Terminology (AMT) version 2	1.2.36.1.2001.1004.100

Reference sets are specified in the 'Vocab' column of CDA implementation guides. Figure 1 shows the 'Vocab' column of the *eReferral CDA Implementation Guide*.

ent	Data Component Definition	Card	CDA Schema Data Element	Vocab	Comments
CDA Body Level 3 Data Elements			Context: ClinicalDocument/component/structuredBody/component[med_hist]/section		
Problem/Diagnosis	The problems and/or diagnoses that form part of the	0*	entry[prob]		
	care.		entry[prob]/observation		
			entry[prob]/observation/@classCode="OBS"		
			entry[prob]/observation/@moodCode="EVN"		
			entry(prob)/observation/id	UUID	See <id> for avail-</id>
				This is a technical identifier that is used for system purposes such as matching. If a suitable internal key is not available, a UUID may be used.	able autoures.
			entry(prob)/observation/code		
			entry[prob]/observation/@code="282291009"		
			entry[prob]/observation/@codeSystem="2.16.840.1.113883.6.96"		
			entry(prob)/observation/@codeSystemName="SNOMED CT-AU"		
			entry[prob]/observation/@displayName="Diagnosis interpretation"		
Problem/Diagnosis > Problem/Diagnos- is Identification	Identification of the problem or diagnosis.	11	enty(prob)/observation/value:CD	SNOMED CT-AU Problem/Diagnosis Reference Set	See <code> for available attributes.</code>
Problem/Diagnosis > Date of Onset	Estimated or actual date the Problem/Diagnosis began, in the opinion of the clinician.	01	entry[prob]/observation/effectiveTime		See <time> for available attributes.</time>

Figure 1 - Vocab column of eReferral CDA implementation guide

The Validator examines a pre-configured set of locations in clinical documents from a set of clinical document types to make sure that the codes in those locations are from the specified reference sets.

These locations have been configured for the following types of clinical documents:

- Discharge Summary;
- eHealth Diagnostic Imaging Report;
- eHealth Dispense Record;
- eHealth Prescription Record;
- eReferral;
- Event Summary;

- Shared Health Summary; and
- Specialist Letter.

In the example in Figure 1, the Validator determines whether codes used for the Problem/Diagnosis data element within an eReferral clinical document are contained within the Problem/Diagnosis reference set of the SNOMED CT-AU code system.

If the Validator finds a code from a code system that is not listed in Table 1, it will report a warning to indicate it cannot validate the code.

## 2.3.2 Case significance

If a code in a clinical document is from a code system derived from SNOMED CT, including SNOMED CT-AU and AMT version 3, the Validator will use case significance to determine whether the value of the display name of that code is the preferred term. Display names of codes from other code systems supported by the Validator are not considered to be case sensitive.

The *SNOMED CT Technical Implementation* Guide [IHTSDO2014] describes how case significance can be used to determine whether a clinical document display name matches the preferred term from the relevant specification.

If the preferred term is entirely case sensitive, the case and text used in the clinical document display name must exactly match that of the preferred term.

If only the initial character of the preferred term is case insensitive, the initial character of the display name may be either lower or upper case (i.e. the initial character of other words in the term are case sensitive). If the entire preferred term is case sensitive, the text in the display name may be either lower or upper case.

## 2.3.3 Limitations of code validation

The code validation function of the Validator has many limitations, including the following:

- 1 Validation of ANZSCO codes uses the Australian and New Zealand Standard Classification of Occupations, First Edition Revision 1, issued 25 June 2009. Previous and later versions of ANZSCO are not supported by the Validator.
- 2 Code validation is not available for all types of clinical documents supported the Validator.
- 3 The Validator searches a clinical document for occurrences of the code system identifiers listed in Table 1 and overlooks occurrences of other code system identifiers. The user must manually inspect a clinical document for occurrences of other code system identifiers to verify the associated code system name, code and display name.

## 2.4 XDS Metadata validation

Additional rules are applied when uploading a document to the My Health Record system. These rules test data that are not only inside the CDA Package, but accompany the CDA Package as what is known as XDS Metadata.

This validation takes a request SOAP message (XML) for uploading a CDA document to the My Health Record system, and does a number of checks that the My Health Record system also performs, but gives a more helpful response than 'Document metadata failed validation'.

It also displays all the data it did find to that the user can check it was what they expected it to be.

## 2.5 Other limitations of the Validator

In addition to the limitations of package validation (Section 2.1.3), template validation (Section 2.2.1) and code validation (Section 2.3.3), the following limitations also apply to the Validator:

- 1 Where the Validator can be used to test a clinical document (please refer to the *Clinical Package Validator Product Data Sheet*), the Validator renders that clinical document into a human-readable form. Its rendering conforms to most, but not all, of the generic requirements for the rendering of clinical documents stated in the *CDA Rendering Specification, Clinical Documentation* [NEHTA2012a].
- 2 The generic requirements for rendering clinical documents do not apply to eHealth prescription and dispense views, even though these views are clinical documents. The Validator does not implement the specific requirements for rendering eHealth prescription and dispense views, but instead applies the generic CDA rendering requirements.
- 3 Some types of conformance tests are inherently manual and cannot be automated in the Validator.

As a result of these and other limitations, the validation of a clinical document cannot be solely performed by the Validator. It must be accompanied by manual inspection of the clinical document's XML file.

## **3** Using the Validator

This section describes the menus, parameters, commands and other features of the Validator. It also describes the results and reports generated by the Validator.

## 3.1 Validator menus

This section describes the purpose of each Validator menu option.

**Note:** Gaps in the file paths within the following screenshots should feature your username or equivalent when following the documented procedures.

### 3.1.1 File menu

File Conf	iguration Help	
Exit		
File :	Select an input file to validate	
Template:	<b></b>	]
Addn Rules:	Select additional rules template folder for validation	

Figure 2 - File menu option

• File  $\rightarrow$  Exit

The Validator will close if this menu option is selected.

### 3.1.2 Configuration menu

File	Con	figuration	Help		
		Manage T	emplates		_
		Manage T	erminology		
		Manage T	emporary File Location		
Temp	late:			-	-
Addn F	Rules:	Select ad	ditional rules template folder f	for validation	

Figure 3 - Configuration menu options

#### • Configuration → Manage Templates

**Template Management:** This menu option allows the user to import and manage My Health Record templates for validating clinical documents (Figure 4). Template management is described in the Clinical Package Validator Installation and Configuration Guide.

	Template Manager – 🗖 🗙
Manage Terr Configuration NASH Test Certificate	plates           [CN=general 8003629900024031 kd electronicheath.net.au, O=DHSITESTORGA44, DC=8003629900024031, DC=id, DC=electronicheath, DC=net, DC=au         v
Templates Packages	Import existent         Inport exi

Figure 4 - Template management menu

### • Configuration → Manage Terminology

**Terminology Management:** This menu option allows the user to see which terminology datasets are installed, load new terminology datasets, and remove terminology datasets (Figure 5). Terminology management is described in the Clinical Package Validator Installation and Configuration Guide.

[] Terminology	×
Terminology Management Configuration and Runtime Terminology OB File: Terminology/08.df 450MB RefFetales for 50NO RefFlates for 50NO SNOME/ANT 37 no	der after unspping the terminology package. The subfolder should be called IED/ANT. From Dac 2015 SNOMED and ANT come in one file. The Load wo n/s upgoots the function. ANT v 3 on engine supported.
Load SNOMED/AMT Load P	V3: Folder Zp Clear All SNOMED datasets B5: Folder Zp Clear All PBS datasets
For SNOMED/ANT or use NCTS syndau For PBS XML V3 Rie (ZIP	sta visit this website Ion feed NCTS Syndication Feed NCTS Syndication Feed Network, and select http://www.obs.cov.au/browse/downloads
Remove old dataset Compress DB	
	Close

Figure 5 - Terminology management menu

### • Configuration → Manage Temporary File Location

**Default Temp Directory Path:** This menu option allows the user to change the location used for storing temporary files (Figure 6). More information is described in the *Clinical Package Validator Installation and Configuration Guide*. Please note the text in RED. This highlights that the Validator will delete every file and subfolder in this temporary folder, every time it runs. So, do not set it to any folder that contains files you need to keep.

	Configuration		
Default Te	mp Directory Path :		
C:\Digital	Health\CPV27\Temp		
Use this pa ANYTHING EVERY TIM data you w	Use this path to point to where you store your temporary data. PLEASE NOTE, ANYTHING IN THIS DIRECTORY (including sub-directories) WILL BE DELETED EVERY TIME THE VALIDATOR RUNS, so don't set it to a directory where you have data you wish to keep.		
	Save Cancel		

Figure 6 - Default temp directory path menu

### 3.1.3 Help menu

## • Help $\rightarrow$ About

This menu option displays the version number, copyright, and acknowledgements for the Validator.

## 3.2 Validator parameters

Before the Validator can validate a clinical document or clinical package, some parameters must first be set.

If the Validator has been installed and configured according to the *Clinical Package Validator Installation and Configuration Guide*, the only parameter that may need to be set is the clinical document or package to be validated. The full set of parameters that may be set are listed in Table 3.

Please refer to the *Clinical Package Validator Product Data Sheet* for more details on the scope of template package validation.

Parameter	When to set
Clinical document or package to be validated	Always.
Template to be applied	If there is more than one template to select from.
Additional template to be applied	If an additional template package is to be applied.
Context	If the context is not the default value of 'My Health Record'.

Table 3 -	Validator	parameters
-----------	-----------	------------

## 3.2.1 File parameter

The File parameter displays the location of the document that is to be validated (Figure 7).

File Configuration Help				
File : Select an input file to validate	6	<ul> <li>MHR</li> <li>P2P</li> </ul>	Run Conformance	Load and Validate XDS Metadata
Template: v			Show report	
Addn Rules: Select additional rules template folder for validation	$\bigcirc$		Run Addn Rules Only	
Information				

Figure 7 - File parameter

The Validator uses the filename extension to determine the type of the file to be validated:

- a file with the '.xml' or '.XML' filename extension is assumed to be a clinical document;
- a file with the '.zip' filename extension is assumed to be a clinical package; and
- a file with the '.hl7' filename extension is assumed to be an HL7 MDM wrapped clinical package.

Two options are provided for selecting the file that is to be validated.

#### Option one

The first option is to select the file by browsing. Click the **File Open** button (Figure 8).

File Configuration Help				
File : Select an input file to validate	<b>`</b>	<ul><li>MHR</li><li>P2P</li></ul>	Run Conformance	Load and Validate XDS Metadata
Template:	~			
Addn Rules: Select additional rules template folder for validation	<b>``</b>		Run Addn Rules Only	
Information				

Figure 8 - Selecting the XML button

Navigate to the location of the clinical document, clinical package or HL7 MDM wrapped clinical package, select the file and click **Open** (Figure 9).

🔲 Open					x
				✓ 4 Search test	٩
Organize 🔻 New folder				8≡ ▼ 🗍	0
🛠 Favorites	Name	Date modified	Туре		
📜 Downloads	1.3.16.1.38818.2305739 - MBS	22/05/2013 5:42 PM	Compresse		
🧮 Desktop	b CDA_in_CDA	9/05/2014 4:42 PM	Compresse		
🔛 Recent Places	b CDA_IN_CDA_2	9/05/2014 4:42 PM	Compresse		
📃 Desktop (2)	CDA_SIGN	30/04/2014 12:50	XML File		
	Discharge_Summary_Invalid_codeSystem	4/06/2014 11:38 AM	Compresse		
📜 Libraries	event summary	16/04/2014 3:16 PM	XML File		
Documents	SharedHealthSummary - Christine Dunca	1/05/2014 4:26 PM	XML File		
🌙 Music	TestData_7.hl7	11/04/2014 1:58 PM	HL7 File		
Pictures	🚹 TestData_7	11/04/2014 1:58 PM	Compresse		
Subversion	TortData 8	13/05/2014 10:05	XML File		
Videos	🜗 TestData_9	30/04/2014 12:50	Compresse		
Computer	۲		,	Select a file to preview.	
File name:				✓ CDA Validator Files	•
				Open Cancel	

Figure 9 - Selecting the file to be validated

### Option two

The second option for selecting the file to be validated is to drag the file and drop it into either the **File** field or the **Information** tab (Figure 10).

File Configuration Help				
File : Select an input file to validate	6	MHR	Run Conformance	Load and Validate XDS
	-	O P2P	Show Report	Metadata
Template:				
Addn Rules: Select additional rules template folder for validation			Run Addn Rules Only	

Figure 10 - Selecting the file to be validated by dragging and dropping

The Validator automatically examines the content of the file to determine the type of the clinical document being validated. The types of clinical documents that are known to the Validator are listed in section 2.2. The clinical document type is displayed in the Document Type field in the **Information** tab (Figure 11).

File Confi	guration Help		
File :	C:\Users\User\Desktop\CDa-DischargeSummary_Test_For_RCH.xml	<ul><li>MHR</li><li>P2P</li></ul>	Run Conformance
Template:	e-Discharge Summary 1A (1.2.36.1.2001.1006.1.20000.18 ver 32620)		
Addn Rules:	Select additional rules template folder for validation		Run Addn Rules Only
Information			
- Configu	ration and Runtime Information Template Package		
	Document Type: Discharge Summary		

Figure 11 - Document Type field displaying the type of the clinical document being validated

If the Validator cannot determine the type of the clinical document being validated, an error message is displayed (Figure 12).



Figure 12 - Error message when the type of a clinical document is unknown

The Validator may display other error messages if a severe error prevents it from continuing (Figure 13 and Figure 14).



Figure 13 - Error message when opening a ZIP file that is not a clinical package



Figure 14 - Error message when opening an XML file that does not conform to the HL7 CDA R2 specification

The Validator will display a warning message if it does not have a template to validate the type of clinical document that has been imported (Figure 15).



Figure 15 - Warning message when there is no template for the type of clinical document

The user can continue to still run an Additional Rules template even if a document template does not exist.

## 3.2.2 Template parameter

The **Template** parameter displays the My Health Record template to be used for validating the selected clinical document (Figure 16).

File Configuration Help			
File : Select an input file to validate	6	MHR	Run Conformance
	_	O P2P	Show Report
Template:			
Addn Rules: Select additional rules template folder for validation			Run Addn Rules Only
Information			



The **Template** field has no information before a clinical document is selected. Once a document is selected, the Validator will determine the type of the selected document.

The Validator needs a My Health Record template for each type of clinical document at each level of conformance. As templates are revised, more than one template may exist for a specific clinical document type and conformance level. Testers should use the most recent version of a template unless there is a reason for choosing an earlier version. A template package directory is published on the Agency website<sup>4</sup>.

If the Validator has more than one template for the type of document to be validated, the **Template** field will contain a drop-down list of all templates that may be applied so that the user can select a template (Figure 17).

File Confi	guration Help			
File :	C:\Users\User\Desktop\CDa-DischargeSummary_Test_For_RCH.xml	6	MHR	Run Conformance
			O P2P	Show Report
Template:	e-Discharge Summary 1A (1.2.36.1.2001.1006.1.20000.18 ver 32620)	•		
Addn Rules:	e-Discharge Summary 1A (1.2.36.1.2001.1006.1.20000.18 ver 32620)			Run Addn Rules Only
	e-Discharge Summary IA (1.2.36.1.2001.1006.1.2000.0.3 ver 32620) e-Discharge Summary IB (1.2.36.1.2001.1006.1.20000.19 ver 32620)	-		
Information	e-Discharge Summary 1B (1.2.36.1.2001.1006.1.20000.24 ver 32620)			
	e-Discharge Summary 1B (1.2.36.1.2001.1006.1.20000.9 ver 147) e-Discharge Summary 2 (1.2.36.1.2001.1006.1.20000.10 ver 148)			
Configu	e-Discharge Summary 2 (1.2.36.1.2001.1006.1.20000.20 ver 32620)			
	e-Discharge Summary 2 (1.2.36.1.2001.1006.1.20000.25 ver 32620)			
	e-Discharge Summary 3A (1.2.36.1.2001.1006.1.20000.21 ver 32620)			
	e-Discharge Summary 3A (1.2.36.1.2001.1006.1.20000.26 ver 32620)			
Templa	a e-Discharge Summary 3B (1.2.36.1.2001.1006.1.20000.22 ver 32620)			
Ter	Terbischalge Summary SD (1.2.30.1.2001.1006.1.20000.27 Ver 52620)			
	Conformance Level: 1A			
Temp	late Effective Date: Monday, 1 April 2013			
	Template Version: 32620			
	i empiate Path: C:\DigitalHealth\CPV26\Tempiates\1.2.36.1.2001.1006.1.20000.18	3.32620		
	Temp work Path: C:\DigitalHealth\CPV26\Temp			
	zip nie size. Not a zip nie			

Figure 17 - Selecting a template

The **Template** field displays the document type, conformance level and template identifier for each template. Detailed information about the selected template will be displayed in the **Information** tab (Section 3.4).

A warning message is displayed if a template for the type of clinical document being validated is not available (Figure 18).

<sup>&</sup>lt;sup>4</sup> https://www.digitalhealth.gov.au/implementation-resources/clinical-documents/EP-2320-2016/NEHTA-2321-2016



Figure 18 - Warning message if a template is not available

## 3.2.3 Addn Rules parameter

The **Addn Rules** parameter displays the additional template to be used for validating a clinical document (Figure 19). Information about the role of an additional template is provided in section 2.2.

File Confi	puration Help			
File :	C: \Users\User \Desktop \CDa-DischargeSummary_Test_For_RCH.xml		MHR P2P	Run Conformance
Template:	e-Discharge Summary 1A (1.2.36.1.2001.1006.1.20000.18 ver 32620)	_		
Addn Rules:	Select additional rules template folder for validation			Run Addn Rules Only
Information				
Configu	ration and Runtime Information			
	Template Package			
	Document Type: Discharge Summary			

Figure 19 - The additional validation template

Two options are provided for selecting the location of an additional template.

### Option one

The first option is to select the additional template by browsing. Click the folder button (Figure 20).



Figure 20 - Selecting the folder button

File Configuration Help				
File : C:\Users\User\Desktor	Browse For Folder			
File :       C: Users User Desktop         Template:       e-Discharge Summary         Addn Rules:       Select additional rules         Information       Information         Configuration and Runti       Templat         Document Type:       Template Package ID:         Conformance Level:       Template Effective Date:         Template Effective Date:       Template Version:	<ul> <li>&gt; Pictures</li> <li>&gt; Videos</li> <li>&gt; Pictures</li> <li< th=""><th></th></li<></ul>			
Temp Work Path: Zip file size:	↓ Temp ▶ ↓ Templates	~		
	OK Canc	:el .::		

Navigate to the directory in which the additional template is stored (Figure 21).

Figure 21 - Navigating to the directory containing the additional template

Select the additional template (Figure 22).

Browse For Folder	<b>X</b>
Stowse for Folder	E
🔺 🐌 Nehta	
4 📕 CPV23	-
	OK Cancel

Figure 22 - Locating and selecting the additional template

In Figure 22, "C:\Additional templates\Narrative block rules" is the subdirectory in which the additional template was stored.

It is important to select the "Additional templates\Narrative block rules" subdirectory rather than the "Additional templates\Narrative block rules\TEMPLATE" subdirectory. The "Additional templates\Narrative block rules" subdirectory is referred to as a template package. It contains the additional template, an index and a README file (Figure 23).

Name	Date modified	Туре	Size	
la template	29/06/2015 12:34	File folder		
🔊 index	23/04/2015 12:24	Firefox HTML Doc	1 K	В
README	23/04/2015 12:24	Text Document	1 K	В

Figure 23 - Contents of a template package

An error message is displayed if the combined length of the template location and folder name is more than 80 characters (Figure 24).

File Error	×
Template Locati	on too long.
	ок

Figure 24 - Error message when the combined length of the template location and folder name is too long

### Option two

The second option for selecting the location of an additional template is to drag the template folder and drop it into the Addn Rules field (Figure 25).

File Config	uration Help			
File :	C:\Users\User\Desktop\CDa-DischargeSummary_Test_For_RCH.xml	6	MHR	Run Conformance
			O P2P	Show Report
Template:	e-Discharge Summary 1A (1.2.36.1.2001.1006.1.20000.18 ver 32620)			
Addn Rules:	Select additional rules template folder for validation			Run Addn Rules Only
Information				
Configu	ration and Runtime Information			
	Template Package			
	Document Type: Discharge Summary			

Figure 25 - Dragging and dropping an additional template folder into the Addn Rules field

## 3.2.4 Context parameter

The Validator requires a user to select the context for validating a clinical package. The selection of context determines which tests will be applied when a clinical package is validated (Section 2.1).

The Validator supports the My Health Record and P2P contexts:

- The My Health Record context is the set of tests that apply to a clinical package sent to the My Health Record system.
- The P2P context is the set of tests that apply to a clinical package sent from one healthcare provider to another.

The default context for the Validator is My Health Record.

If a file with the '.hl7' filename extension is imported into the Validator, it is assumed to be an HL7 MDM wrapped clinical package and the Validator changes to the P2P context, as the My Health Record system does not support HL7 MDM. For all other types of files, the P2P context must be explicitly selected (Figure 26).

File : C:\Users\User\Desktop\CDa-DischargeSummary_Test_For_RCH.xml	6	<ul><li>MHR</li><li>P2P</li></ul>	Run Conformance
Template: e-Discharge Summary 1A (1.2.36.1.2001.1006.1.20000.18 ver 32620)	*		
Addn Rules: Select additional rules template folder for validation	<b>``</b>		Run Addn Rules Only
Information			

Figure 26 - Selecting the P2P context

## 3.3 Conformance levels

The conformance level against which a clinical document is to be validated is not explicitly selected. Instead, the user selects the My Health Record template package that applies to the type of clinical document and conformance level against which the clinical document is being assessed (Section 3.2.2).

Detailed descriptions of each conformance level can be found in *Clinical Documents - Common Conformance Profile* [NEHTA2015c]. In general, the conformance levels are 1A, 1B, 2, 3A, and 3B. The conformance levels that actually apply depend on the type of the clinical document. The allowed conformance levels for each type of clinical document are listed in the relevant conformance profile in the end product published on the Agency website<sup>5</sup> (e.g. the event summary conformance profile is part of the Event Summary end product).

<sup>&</sup>lt;sup>5</sup> <u>http://www.digitalhealth.gov.au/implementation-resources/clinical-documents</u>

## 3.3.1 Conformance level 1A

A conformance level 1A clinical document has an XML header, and an XML body containing only a caption and a reference to an attached file. The administrative details form part of the header. In this example, the referral is an Adobe PDF file and the link to the referral is all that is contained in the XML body.

In a conformance level 1A clinical document, the data that would normally appear in the body of the document is instead included in an attached file. The Validator can only validate data that appears in the header of the document.

The rendered view of a conformance level 1A eReferral is shown in Figure 27. If the referral is an image (e.g. a JPEG file), the image may be displayed in the body of the rendered document, depending on the type of image.

File : C:\Users\User\Des	top/EReferral 1A.xml				Carlo	I I III II. MAR	
		C		DOD NHK K	un Contormance	Load and Validate XDS Metadata	
emplate: _ Deferral 1D /1 2	26 1 2001 1006 1 21000 14 22624)		0	121	Show Report		
e-Neienai Ib (1.2.	30.1.2001.1000.1.21000.14 Ver 32624)	•					
In Rules: Select additional ru	es template folder for validation	C	2	Rur	Addn Rules Only		
rmation Rendered Document	Sign File Sign File Information Template Validation Report	t Package Report	Reference Sets	Other Terminol	ogy Aspects		
ack Forward							
	e-F	Referral					
Ir Frank HARDING	DoB 22 Jul 1958 (57y*) SEX Male	IHI 8003 6086 6	670 1594	MRN 12	3456		
	START 0	F DOCUMENT					
Food Hospita	START O	F DOCUMENT					
Good Hospita	START O	F DOCUMENT					
Good Hospita	START 0 (General Medical Practitioner) 54566	F DOCUMENT					
Good Hospita	START O (General Medical Practitioner) 54566	F DOCUMENT					
Good Hospita uthor Smith hone 03457	START O (General Medical Practitioner) 54566 t	IF DOCUMENT					
Good Hospita uthor Smith Jone 03457 ttached Conten ructured Body File	START 0 (General Medical Practitioner) 54566 L	IF DOCUMENT					
Good Hospita uthor Smith hone 03457 ttached Conten ructured Body File	START O (General Medical Practitioner) 54566 L ADMINISTI	F DOCUMENT					
Good Hospita uthor Smith hone 03457 ttached Conten ructured Body File Patient	START O (General Medical Practitioner) 54566 t ADMINISTI	F DOCUMENT RATIVE DETAILS Author	_		_		
Good Hospita athor Smith toone 03457 ttached Conten ructured Body File Patient Name	START 0 (General Medical Practitioner) 54566 t Mr Frank Troy HARDING	RATIVE DETAILS Author Name	_	Smith		_	
Sood Hospita athor Smith none 03457 ttached Conten ructured Body File Patient Name	START O (General Medical Practitioner) 54566 t Mr Frank Troy HARDING a.k.a. Mr Frank Tobie HARDING	RATIVE DETAILS Author Name		Smith a.k.a. Wong	Sir (General Medical M	Practitioner)	
Cood Hospita Ithor Smith 03457 Ittached Conten ructured Body File Patient Name Sex	START 0 (General Medical Practitioner) 54566 t ADMINISTI Mr Frank Troy HARDING a.k.a. Mr Frank Toble HARDING Male	F DOCUMENT	n	Smith a.k.a. Wong Good Hospita	Sir (General Medical I	Practitioner)	
Sood Hospita thor Smith 03457 ttached Conten ructured Body File Patient Name Sex Indigenous Status	START 0 (General Medical Practitioner) 54566 t Mr Frank Troy HARDING a.k.a. Mr Frank Tobie HARDING Male Neither Aboriginal nor Torres Strait Islander origin	F DOCUMENT RATIVE DETAILS Author Name Organisation Address	1	Smith a.k.a. Wong Good Hospita not applicabl	Sir (General Medical I I e	Practitioner)	
Sood Hospita thor Smith 03457 ttached Conten ructured Body File Patient Name Sex Indigenous Status Date of Birth	START 0 (General Medical Practitioner) 54566 t Mr Frank Troy HARDING a.k.a. Mr Frank Tobie HARDING Male Neither Aboriginal nor Torres Strait Islander origin 22 Jul 1958 (57v)	F DOCUMENT  Author Name Organisatior Address Address Address Bhone	'n	Smith a.k.a. Wong Good Hospita not applicabl not applicabl	Sir (General Medical i il e e	Practitioner)	
Cood Hospita Internet Smith 03457 Ittached Conten ructured Body File Patient Name Sex Indigenous Status Date of Birth	START 0 (General Medical Practitioner) 54566 t Mr Frank Troy HARDING a.k.a. Mr Frank Tobie HARDING Male Neither Aboriginal nor Torres Strait Islander origin 22 Jul 1958 (57y) ** Age is calculated from date of birth	F DOCUMENT RATIVE DETAILS Author Name Organisation Address Phone Email	1	Smith a.k.a. Wong Good Hospita not applicabl 0345754566 0345754566	Sir (General Medical I II e (Workplace) alauthors corr (Work	Practitioner)	
Sood Hospita uthor Smith 03457 ttached Conten ructured Body File Patient Name Sex Indigenous Status Date of Birth IHI	START 0 (General Medical Practitioner) 54566 t Mr Frank Troy HARDING a.k.a. Mr Frank Toble HARDING Male Nether Aboriginal nor Torres Strait Islander origin 22 Jul 1958 (57y) * Age is calculated from date of birth 8003 6086 6670 1594	F DOCUMENT RATIVE DETAILS Author Name Organisation Address Address Address Phone Email	'n	Smith a.k.a. Wong Good Hospita not applicabl not applicabl od45754564 authen@glob	Sir (General Medical I Il e e (Vorkplace) alauthens.com (Work	Practitioner) kplace)	
Cood Hospita uthone Smith 03457 Uttached Conten tructured Body File Patient Name Sex Indigenous Status Date of Birth IHI Local Identifiers	START 0 (General Medical Practitioner) 54566 t Mr Frank Troy HARDING a.k.a. Mr Frank Tobie HARDING Male Neither Aboriginal nor Torres Strait Islander origin 22 Jul 1958 (57v) " Age is calculated from date of birth 8003 6086 6670 1594 123456 (Croydon GP Centre)	F DOCUMENT Author Name Organisatior Address Address Address Phone Email Clinical Docu	n ument Detai	Smith a.k.a. Wong Good Hospita not applicabl not applicabl 0345754566 authen@glob	Sir (General Medical i i e e (Workplace) alauthens.com (Work	Practitioner) kplace)	

Figure 27 - Rendered view of a level 1A eReferral

## 3.3.2 Conformance level 1B

A conformance level 1B clinical document has an XML header, and an XML body that includes at least one section that contains a label and a narrative block with clinical information. The data for the body is included in the narrative block(s) and may also appear as structured data.

As structured data is not required in the body of a level 1B clinical document, any structured data in the body will not be validated by the Validator using a conformance level 1B template. Any terminology codes from supported code systems will however be validated.

The rendered view of a conformance level 1B eReferral is shown in Figure 28. There is only one section in the body of this rendered eReferral, although level 1B clinical documents may have more than one section. The label of the section is Title and the text below the label is the rendered text from the narrative block.

The Comgulation help						
File : C:\Users\User\De	sktop\EReferral_1B.xml	6	) ( M	IHR Run Conform	nance	Load and Validate XDS Metadata
			() P.	2P Show Rep	ort	
Template: e-Referral 1B (1.2	2.36.1.2001.1006.1.21000.14 ver 32624)	*				
Addn Rules: Select additional r	ules template folder for validation	C	2	Run Addn Rule	es Only	
Information Rendered Documen	t Sign File Sign File Information Template Validation Report	t Package Report	Reference Sets	Other Terminology Aspects	-	
Back Forward						
Mr Frank <b>HARDING</b>	e-R 22 DoB 22 Jul 1958 (57y*) SEX Male	<b>Referral</b> Jul 2015 IHI 8003 6086 6	670 1594	MRN 123456		í í
Good Hospita Author Smith Phone 0345	START O ) h (General Medical Practitioner) 754566	F DOCUMENT				
Good Hospita Author Smith Phone 0345	START O h (General Medical Practitioner) 754566	F DOCUMENT				
Good Hospita Author Smith Phone 0345 Title Narrative	START O 1 (General Medical Practitioner) 754566	F DOCUMENT				
Good Hospita Author Smith Phone 0345 Title Narrative	START O (General Medical Practitioner) 754566 ADMINISTR	F DOCUMENT				
Good Hospita Author Smith Phone 0345 Title Narrative	START O (General Medical Practitioner) 754566 ADMINISTR	F DOCUMENT		_	_	
Good Hospita Author Smith Phone 0345 Title Narrative Patient Name	START O 1 (General Medical Practitioner) 754566 ADMINISTR Mr Frank Troy HARDING a.k.a. Mr Frank Toble HARDING	RATIVE DETAILS Author Name	2	Smith a.k.a. Wong Sir (Gene	eral Medical Practit	ioner)
Good Hospita Author Smith Phone 0345 Title Narrative Patient Name Sex	START O al (General Medical Practitioner) 754566 ADMINISTR Mr Frank Troy HARDING a.k.a. Mr Frank Toble HARDING Male	F DOCUMENT RATIVE DETAILS Author Name Organisation	5 1 1	Smith J.k.a. Wong Sir (Gene Sood Hospital	eral Medical Practit	ioner)
Good Hospita Author Smit Phone 0345 Title Narrative Patient Name Sex Indigenous Status	STARI O h (General Medical Practitioner) 754566 Mr Frank Troy HARDING a.k.a. Mr Frank Toble HARDING Male Neither Aboriginal nor Torres Strait Islander	F DOCUMENT RATIVE DETAILS Author Name Organisation Address	2 2 1	Smith a.k.a. Wong Sir (Gene Sood Hospital rot applicable	eral Medical Practit	ioner)
Good Hospita Author Smith Phone 0345 Title Narrative Patient Name Sex Indigenous Status	START O h (General Medical Practitioner) 754566 Mr Frank Troy HARDING a.k.a. Mr Frank Toble HARDING Male Neither Aboriginal nor Torres Strait Islander orgin	F DOCUMENT RATIVE DETAILS Author Name Organisation Address Address	i (	Smith a.k.a. Wong Sir (Gene Good Hospital not applicable not applicable	eral Medical Practit	ioner)
Good Hospita Author Smith Phone 0345 Title Narrative Patient Name Sex Indigenous Status Date of Birth	START O a) h (General Medical Practitioner) 754566 Mr Frank Troy HARDING a.k.a. Mr Frank Toble HARDING Male Neither Aboriginal nor Torres Strait Islander origin 22 Jul 1958 (57y) * Ane is calculated from date of birth	F DOCUMENT RATIVE DETAILS Author Name Organisation Address Address Phone	2 2 3 0 1 1 1 1	Smith a.k.a. Wong Sir (Gene Good Hospital not applicable 0345754566 (Workpla 0345754566 (Workpla	eral Medical Practiti ace)	ioner)
Good Hospita Author Smit Phone 0345 Title Narrative Patient Name Sex Indigenous Status Date of Birth IHI	STARI O h (General Medical Practitioner) 754566 Mr Frank Troy HARDING a.k.a. Mr Frank Tobie HARDING Male Neither Aboriginal nor Torres Strait Islander origin 22 Jul 1958 (57y) " Age is calculated from date of birth 8003 6086 6670 1594	F DOCUMENT Author Name Organisation Address Address Phone Email		Smith a.k.a. Wong Sir (Gene Sood Hospital not applicable not applicable 3345754556 (Workpla 345754566 (Workpla authen@globalauthen	aral Medical Practiti ace) s.com (Workplace)	ioner)
Good Hospita Author Smith Phone 0345 Title Narrative Patient Name Sex Indigenous Status Date of Birth IHI Local Identifiers	START O h (General Medical Practitioner) 754566 Mr Frank Troy HARDING a.k.a. Mr Frank Toble HARDING Male Neither Aboriginal nor Torres Strait Islander origin 22 Jul 1958 (57y) * Age is calculated from date of birth 8003 6086 6670 1594 123456 (Croydon GP Centre)	F DOCUMENT Author Name Organisation Address Address Address Phone Email <i>Clinical Party</i>	a a a a a a a a a a a a a a a a a a a	Smith a.k.a. Wong Sir (Gene Sood Hospital not applicable not applicable 3345754556 (Workpla authen@globalauthen	eral Medical Practit ace) s.com (Workplace)	ioner)

Figure 28 - Rendered view of a level 1B eReferral

## 3.3.3 Conformance level 2

A conformance level 2 clinical document has an XML header and an XML body that contains all the mandatory sections specified in the relevant CDA implementation guide. Each mandatory section has a label and a narrative block with clinical information. The data for the body is included in the narrative blocks and may also appear as structured data.

As structured data is not required in the body of a level 2 clinical document, any structured data in the body will not be validated by the Validator using a conformance level 2 template. Any terminology codes from supported code systems will however be validated.

The rendered view of a conformance level 2 eReferral is shown in Figure 29. Each section has a label and a narrative block.

File Configuration Help				
File : C:\Users\User\Desktop\EReferral_2.xml		MHR	Run Conformance	Load and Validate XDS
		○ P2P	Show Report	Frecosta
Template: e-Referral 2 (1.2.36.1.2001.1006.1.21000.15 v	r 32624)	¥		
Addn Rules: Select additional rules template folder for validational rules are consistent and the select additional rules are consistent additional rules are consistent and the select additional rules are consistent and the select additional rules are consistent additional r	ion	<b></b>	Run Addn Rules Only	
Information Rendered Document Sign File Sign File In	ormation Template Validation Report Packa	age Report Reference Sets Other	Terminology Aspects	
Back Forward				
Mr Frank HARDING DoB 22 Jul 1958	e-Referra 22 Jul 2016 DECEASED) SEX Male II	<b>I</b> HI 8003 6086 6670 1594	MRN 123456	Â
	START OF DOCU	MENT		
Good Hospital Author Doctor Good Smith (General Phone 0345754566 Paferral Detail	Medical Practitioner)			
Referral reason				
Date and Duration	Dura	tion		
22 Jul 2015 15:32:20+1000	22 Ju	I 2015 15:32:20+1000 -> 22	Jul 2015 15:32:20+1000	
Adverse Reactions				
Adverse Reactions				
Substance/Agent	Manifestations	Reaction	Туре	
Plant diterpene	<ul><li>Fetal viability</li><li>Sterility</li></ul>	Allergic r	eaction	
A M	eren anderen	All!		~

Figure 29 - Rendered view of a level 2 eReferral

## 3.3.4 Conformance level 3A

A conformance level 3A clinical document has an XML header, and an XML body that contains all the mandatory sections specified in the relevant CDA implementation guide. Each mandatory section has a label and a narrative block with clinical information. In addition, each section has structured clinical information for mandatory data elements.

Any terminology codes from supported code systems will be validated by the Validator (Section 2.3).

A rendered conformance level 3A clinical document is identical to a rendered conformance level 2 clinical document. Similarly, the XML files are identical except the XML file of the level 3A document contains additional structured data.

## 3.3.5 Conformance level 3B

A conformance level 3B clinical document has an XML header, and an XML body that contains all mandatory sections specified in the relevant CDA implementation guide. Each mandatory section has a label and a narrative block with clinical information. In addition, each section has structured clinical information for mandatory data elements.

A conformance level 3B clinical document must contain codes from specified code systems, which is optional for lower levels of conformance. Terminology codes such as AMT, SNOMED CT-AU, or PBS must be present wherever they are allowed in the level 3B clinical document. The Validator will check whether the codes used in the clinical document can be found in the specified code systems (Section 2.3).

Any terminology codes from supported code systems will be validated by the Validator (Section 2.3).

A rendered conformance level 3B clinical document is identical to a rendered conformance level 2 and 3A clinical document. The XML file of a level 3B clinical document is identical to the XML file of a level 3A clinical document, except the XML file of the level 3B document must also contain codes from the specified code systems.

## 3.4 Configuration and runtime information

The **Information** tab displays information about the type of the clinical document being validated and information about the template (Figure 30) as well as the content of the zip file (if one chosen).

File Confi	guration Help			
File :	C:\Users\User\Desktop\DS-Max-Dodgy.zip	6	MHR	Run Conformance
			○ P2P	Show Report
Template:	e-Discharge Summary 1A (1.2.36.1.2001.1006.1.20000.18 ver 32620)			
Addn Rules:	Select additional rules template folder for validation			Run Addn Rules Only
Information				
Configu	ration and Runtime Information			
	Template Package		Files found i	n zip file:
	Document Type: Discharge Summary		THE_XDM/SUB	SET01/CDA_ROOT.XML

Figure 30 - Configuration and runtime information

The information displayed is described in Table 4.

Label	Description
Document Type	The type of the clinical document to be validated.
Template Package Name	The name of the template package as recorded in the template package metadata.
Template Package ID	The identifier of the template package as recorded in the template package metadata.
Conformance Level	The conformance level as recorded in the template package metadata.
Template Effective Date	The date the template package was approved as recorded in the template package metadata.
Template Version	The version number of the template package as recorded in the template package metadata.
Template Path	The location of the template package.
Temp Work Path	The location used by the Validator to store temporary files.
Zip file size	The size of the zip file (if the file is a zip file).

Table 4 - Configuration and runtime information displayed in the Information tab

If both the Document Type and the Template Package Name fields display names of differing types of documents, an incorrect template package has been selected.

**Note:** Some document names have changed over time, so it is possible that the Document Type and Template Package Name fields may display different names for the same type of document. This is not a problem, and validation can proceed normally.

If an additional template is selected, the **Information** tab displays information about the additional template (Figure 31).

coninguration				
File : C:\Users\User\Desk plate: e-Discharge Summa n Rules: C:\DigitalHealth\TP-	top/DS-Max-Dodgy.zp wy 1A (12.36.1.2001.1006.1.20000.18 ver 32620) V IQRules_y.1.4.9	<ul> <li>MHR</li> <li>P2P</li> </ul>	Run Conformance Show Report	Load and Validate XDS Metadata
nation				
onfiguration and Rur	ntime Information			
Temp	late Package	Files found	in zip file:	
Document Type Template Package Name Template Package ID Conformance Level Template Effective Date Template Version Template Path Temp Work Path Zip file size	<ol> <li>Discharge Summary</li> <li>e-Discharge Summary</li> <li>1.2.36.1.2001.1006.1.20000.18</li> <li>1A</li> <li>Monday, I April 2013</li> <li>32620</li> <li>C:\DigitalHealth/CPV26\Templates\1.2.36.1.2001.1006.1.20000.18.33</li> <li>C:\DigitalHealth/CPV26\Temp</li> <li>75.43 KB</li> </ol>	IHE_XDM/SU IHE_XDM/SU IHE_XDM/SU IHE_XDM/SU IHE_XDM/SU	BSET01/CDA_ROOT.XML BSET01/CDA_SIGN.XML BSET01/path1234.pdf BSET01/x-ray.jpg BSET01/iogo.png	
Additi	onal Rules			
Template Package Name Template Package ID Conformance Level Template Effective Date Template Version Template Path	2: Extra Rules Template - Tests for a CDA document 2: Extra Rules Template Package 2: Extra Rules 2: Friday, 1 May 2015 3: 1 3: C:\DigitalHealth\TP-IQRules_v1.4.9			

Figure 31 - Information about an additional template

The information displayed about the additional template is described in Table 5.

Label	Description
Template Package Name	The name of the additional template package as recorded in the template package metadata.
Template Package ID	The identifier of the additional template package as recorded in the template package metadata.
Conformance Level	The conformance level as recorded in the additional template package metadata.
Template Effective Date	The date the additional template package was approved as recorded in the template package metadata.
Template Version	The version number of the additional template package as recorded in the template package metadata.
Template Path	The location of the additional template package.

Table 5 - Information	n about the	additional	template
-----------------------	-------------	------------	----------

The "Files found in zip file" box only appear if a CDA Package has been selected. It lists the files found in the zip file.

## 3.5 Run Conformance command

The **Run Conformance** command allows a user to request the Validator to test whether a clinical document or clinical package (for which the Validator may be used) conforms to the relevant specifications (Figure 32), subject to the limitations set out in the Clinical Package Validator Product Data Sheet.

File Configuration Help				
File :	C: \Users\User\Desktop\DS-Max-Dodgy.zip	6	MHR	Run Conformance
			O P2P	Show Report
Template:	e-Discharge Summary 1A (1.2.36.1.2001.1006.1.20000.18 ver 32620)			
Addn Rules:	Select additional rules template folder for validation			Run Addn Rules Only

Configuration and Runtime Information

Figure 32 - Requesting the Validator to test the conformance of a clinical document or clinical package

The tests that are performed vary with the type of object being validated:

- 1 If the object is a clinical package (i.e. a .zip file), the package will be validated as well as the clinical document within the clinical package.
- 2 If the object is an HL7 MDM wrapped clinical package (i.e. an .hl7 file), the clinical package is extracted and both the clinical package and the clinical document within it are validated.
- 3 If the object is a clinical document (i.e. an .xml or .XML file), the clinical document is validated but package validation is not performed.

Template validation is applied to every type of supported clinical document. Validation results are displayed on the graphical user interface (Section 3.7).

## 3.6 Run Addn Rules Only command

The Run Addn rules Only command allows a user to request the Validator to just run the additional rules against the clinical document.

Validation results are displayed on the graphical user interface (Section 3.7).

## 3.7 Validation results

The following tabs are used to display the results of a clinical document or clinical package validation (for which the Validator may be used).

## 3.7.1 Information tab

In addition to displaying the information listed in Section 3.4, the **Information** tab also contains a summary of the validation results.

Label	Description
Template Validation Results	The total number of errors reported by template validation.
Package Results	The total number of errors reported by package validation. This information is only included if a clinical package was validated.
Reference Set Results	The total number of errors and warnings reported by validation of codes against reference sets, where specified in CDA implementation guide.
Other Terminology Results	The total number of errors and warnings reported by validation of codes against supported code systems.
Additional Rules	The total number of errors reported by validation using the additional template. This information is only included if additional rules have been applied.

Table 6 - Summary of validation results displayed in the Information tab

## 3.7.2 Rendered Document tab

The **Rendered Document** tab displays the rendered clinical document (for which the Validator may be used) that is being validated (Figure 33).

File Configuration Help					
File :	C: \Users\User\Desktop\EReferral_3A_Max.hl7		O MHR	Run Conformance	
			P2P	Show Report	
Template:	e-Referral 1A (1.2.36.1.2001.1006.1.21000.13 ver 32624)	~			
Addn Rules:	n Rules: Select additional rules template folder for validation 📋 Run Addn Rules Only				
Information Rendered Document Sign File Sign File Information Template Validation Report Package Report Reference Sets Other Terminology Aspects					

Figure 33 - Rendered Document tab

Figure 34 is an example of a rendered clinical document displayed on the **Rendered Document** tab. The **Back** and **Forward** buttons allow the user to go back to the rendered view of the clinical document, or forward from the rendered view of the clinical document to the attachment.

File Configuration Help				
File : C: Users\User\Desktop\DS-Max-Dodgy.zip	6	MHR	Run Conformance	Load and Validate XDS Metadata
Template: _ Disalarge Comment 16 (10.2001.2000.10000.10000.10000.20000.		O P2P	Show Report	
Adda Bulace: Solact additional rules template folder for unlidation	× 👝		Run Adda Rulas Only	
Adult Rules: Select additional rules tempate rolder for Validation	•		Kull Adult Kules Olity	
Information Rendered Document Sign File Sign File Information Template Validation Report Package Report	Reference Sets	Other Terminolog	y Aspects	
Back Forward				
Discharge Summa	ary			^
11 May 2016 Mr. Frank HARDING DoB 11 May 1959 (DECEASED) SEX Male IHI 4	8003 6086	5 6670 1594	MPN 123456	
MI HAIK HARDING BUB 11 May 1939 (DECENSED) SEX Male Inte	8003 0080	5 0070 1354	PIKN 123430	
CTADT OF DOCUMENT	Ŧ			_
	•			
Good Hospital				
Phone 0345754566				
Discharge From Ward B				
Health Profile				
This section may contain the following subsections Adverse Reactions and Alerts.				
Adverse Reactions				
• Disc				
• Circle				
Square				
i. LittleRoman				
I. BigRoman				
				· ·

Figure 34 - Rendered clinical document displayed on the Rendered Document tab

## 3.7.3 Sign File tab

The **Sign File** tab displays the contents of the CDA\_SIGN.XML file in a clinical package (Figure 35). The **Sign File** tab is only displayed when the file being validated is either a clinical package or an HL7 Medical Document Management (MDM) wrapped clinical package.

File Configuration Help					
File : C:\Users\User\Desktop\EReferral_3A_Max.hl7		6	MHR	Run Conformance	
			P2P	Show Report	
Template:	e-Referral 1A (1.2.36.1.2001.1006.1.21000.13 ver 32624)	~			
Addn Rules:	Select additional rules template folder for validation			Run Addn Rules Only	
Information Rendered Document Sign File Sign File Information Template Validation Report Package Report Reference Sets Other Terminology Aspects					

Figure 35 - Sign File tab

Figure 36 is an example of a CDA\_SIGN.XML file that is displayed on the Sign File tab.

File Conf	iguration Help				
File :	C:\Users\User\Desktop\DS-Max-Dodgy.zip	6	MHR	Run Conformance	Load and Validate XDS Metadata
			O P2P	Show Report	
Template:	e-Discharge Summary 1A (1.2.36.1.2001.1006.1.20000.18 ver 32620) V				
Addn Rules:	Select additional rules template folder for validation	<b></b>		Run Addn Rules Only	
Information	Rendered Document Sign File Sign File Information Template Validation Report Package Report Re	ference Sets	Other Terminolog	gy Aspects	
<pre>variable variable variabl</pre>					
- <sigr - <q:< th=""><td><x509certificate>MIIFhDCCBGygAwIBAgIDBgUQMA0GCSqGSIb3DQ <xx509data> (/keyInfo&gt; signature&gt; natures&gt; natures&gt; edPayloadData id="a3c985446-0a17-41ee-b391-b7a04a75b5cf"&gt; LeSignature&gt; idPayloadData id="a3c98546-0a17-41ee-b391-b7a04a75b5cf"&gt; LeSignature&gt; idPayloadData id="a3c98546-0a17-41ee-b391-b7a04a75b5cf"&gt; LeSignature&gt; idPayloadData id="a3c98546-0a17-41ee-b391-b7a04a75b5cf"&gt; LeSignature&gt; idPayloadData id="a3c98546-0a17-41ee-b391-b7a04a75b5cf"&gt; LeSignature&gt; IdPayloadData id="a3c98546-0a17-41ee-b391-b7a04a75b5cf"&gt; LeSignature&gt; IdPayloadData id="a3c98546-0a17-41ee-b391-b7a04a75b5cf"&gt; LeSignature&gt; IdPayloadData id="a3c98546-0a17-41ee-b391-b7a04a75b5cf"&gt; LeSignature&gt; IdPayloadData id="a3c98546-0</xx509data></x509certificate></td><td>EBBQU/ xsd/eSi</td><td>MH8xCzAJE gnature/20</td><td>3gNVBAYTAkFVMQwwC 12"&gt;</td><td>gYDVQQKEwNHT1YxGZA7</td></q:<></sigr 	<x509certificate>MIIFhDCCBGygAwIBAgIDBgUQMA0GCSqGSIb3DQ <xx509data> (/keyInfo&gt; signature&gt; natures&gt; natures&gt; edPayloadData id="a3c985446-0a17-41ee-b391-b7a04a75b5cf"&gt; LeSignature&gt; idPayloadData id="a3c98546-0a17-41ee-b391-b7a04a75b5cf"&gt; LeSignature&gt; idPayloadData id="a3c98546-0a17-41ee-b391-b7a04a75b5cf"&gt; LeSignature&gt; idPayloadData id="a3c98546-0a17-41ee-b391-b7a04a75b5cf"&gt; LeSignature&gt; idPayloadData id="a3c98546-0a17-41ee-b391-b7a04a75b5cf"&gt; LeSignature&gt; IdPayloadData id="a3c98546-0a17-41ee-b391-b7a04a75b5cf"&gt; LeSignature&gt; IdPayloadData id="a3c98546-0a17-41ee-b391-b7a04a75b5cf"&gt; LeSignature&gt; IdPayloadData id="a3c98546-0a17-41ee-b391-b7a04a75b5cf"&gt; LeSignature&gt; IdPayloadData id="a3c98546-0</xx509data></x509certificate>	EBBQU/ xsd/eSi	MH8xCzAJE gnature/20	3gNVBAYTAkFVMQwwC 12">	gYDVQQKEwNHT1YxGZA7
	<pre>Manifest xmlns="http://www.w3.org/2000/09/xmldsig#"&gt;</pre>	a1" />			>

Figure 36 - Display of a CDA\_SIGN.XML file

## 3.7.4 Sign File Information tab

The **Sign File Information** tab displays selected information from the CDA\_SIGN.XML file in a clinical package (Figure 37). This complements information in the **Sign File** tab as this information is more readable. Information from the Public Key Infrastructure (PKI) certificate is also displayed.

The **Sign File Information** tab is only displayed when the file being validated is either a clinical package or an HL7 Medical Document Management (MDM) wrapped clinical package.

File Configuration Help					
File :	C: \Users\User \Desktop \EReferral_3A_Max.hl7	6	O MHR	Run Conformance	
			P2P	Show Report	
Template:	e-Referral 1A (1.2.36.1.2001.1006.1.21000.13 ver 32624)				
Addn Rules:	s: Select additional rules template folder for validation 🛅 Run Addn Rules Only				
Information Rendered Document Sign File Sign File Information Template Validation Report Package Report Reference Sets Other Terminology Aspects					

Figure 37 - Sign File Information tab

Figure 38 is an example of the information displayed on the Sign File Information tab.



Figure 38 - Display of eSignature file information

The information displayed is listed in Table 7.

Label	Description				
Signing Time	The date and time that the clinical document was signed using the PKI certificate.				
Approver Person Id	The identifier of the approver, in the form of a Uniform Resource Identifier (URI). The approver is the person that reviewed and approved the content of the clinical document [NEHTA2015c].				
	Possible values are:				
	<ul> <li>'http://ns.electronichealth.net.au/id/null/person/1.0' if there was no approver.</li> </ul>				
	<ul> <li>'http://ns.electronichealth.net.au/id/null/person/1.0' if there was no approver.</li> </ul>				
	<ul> <li>'http://ns.electronichealth.net.au/id/hi/hpii/1.0/' followed by the approver's HPI-I.</li> </ul>				
	<ul> <li>'http://ns.electronichealth.net.au/id/hi/ihi/1.0/' followed by the approver's IHI.</li> </ul>				
	<ul> <li>The domain namespace of an organisation followed by a local identifier. In this case the organisation is the one that allocated the identifier to the approver.</li> </ul>				
Approver Person Name	The title and name of the person that reviewed and approved the content of the clinical document. If the name is 'NA', there was no approver.				
Organisation Certificate	States whether the certificate is a National Authentication Service for Health (NASH) Public Key Infrastructure (PKI) certificate.				

Table 7 - Summary of information displayed in the Sign File Information tab
Label	Description
Subject	A set of domain components ('DC'), an organisation name ('O'), and a common name ('CN').
	The attributes most relevant to conformance testing are the organisation name, and the national healthcare identifier which is one of the domain components and is also found within the common name. The organisation name and identifier are the name of the healthcare provider organisation or supporting organisation that the certificate was assigned to, and the identifier of that organisation.
Valid From	The start of the validity period for the PKI certificate. The date is displayed in green if the current date (not the signing date) is at or after the start of the validity period, otherwise it is red.
Certificate Policies	States whether the certificate is for a healthcare provider individual, a healthcare provider organisation or a supporting organisation.
Other eSignature files in package	The name(s) of any other eSignature files found within the clinical package. These names are found by opening the clinical package whereas all of the information above this row in this table is obtained from the CDA_SIGN.XML eSignature file.

Figure 39 is another example of the information displayed on the **Sign File Information** tab when a certificate is not a NASH certificate, the certificate policy is unrecognised, and a second eSignature file was found in the clinical package.

File :	C: Users User Desktop ERef	erral_3A_Max.zip	0	MHR	Run Conformance
				O P2P	Show Report
Template:	e-Referral 1A (1.2.36.1.2001	.1006.1.21000.13 ver 32624) V			
ddn Rules:	Select additional rules templa	te folder for validation			Run Addn Rules Only
	Rendered Document Sign File	Sign Eile Information Template Validation Report Package Report Re	ference Sets	Other Terminolog	
ormation					gy Aspects
	an File Information			Cone reminory	gy Aspects
CDA Sig	gn File Information				gy Aspects
CDA Sig	gn File Information				gy Aspects
CDA Sig	gn File Information Signing Time :	2017-10-06T06:25:27.1633771Z			gy Aspects
CDA Sig	gn File Information Signing Time : Approver Person Id :	2017-10-06T06:25:27.16337712 http://ns.electronichealth.net.au/id/hi/hpii/1.0/8003610000021	.101		gy Aspects
formation   1 CDA Sig	gn File Information Signing Time : Approver Person Id : Approver Person Name :	2017-10-06T06:25:27.1633771Z http://ns.electronichealth.net.au/id/hi/hpii/1.0/8003610000021 Doctor Good Smith	101		gy Aspecs
CDA Sig	gn File Information Signing Time : Approver Person Id : Approver Person Name : anisation Certificate	2017-10-06T06:25:27.16337712 http://ns.electronichealth.net.au/id/hi/hpii/1.0/8003610000021 Doctor Good Smith	101		уу жарыса
formation   1 CDA Sig A Orga	gn File Information Signing Time : Approver Person Id : Approver Person Name : anisation Certificate	2017-10-06T06:25:27.1633771Z http://ns.electronichealth.net.au/id/hi/hpii/1.0/8003610000021 Doctor Good Smith This is not a NASH Certificate	101		уу жарыса
formation   1 CDA Sig A Orga	gn File Information Signing Time : Approver Person Id : Approver Person Name : anisation Certificate Subject :	2017-10-06T06:25:27.1633771Z http://ns.electronichealth.net.au/id/hi/hpii/1.0/8003610000021 Doctor Good Smith This is not a NASH Certificate CN=Test Site A094 :9981466254, OU=Test Site A094, O=Test	.101 : Site A09	4, L=TUGGERAI	NONG, S=ACT, C=AU
CDA Sig	gn File Information Signing Time : Approver Person Id : Approver Person Name : anisation Certificate Subject : Valid From :	2017-10-06T06:25:27.16337712 http://ns.electronichealth.net.au/id/hi/hpii/1.0/8003610000021 Doctor Good Smith This is not a NASH Certificate CN=Test Site A094 :9981466254, OU=Test Site A094, O=Test 11/05/2015 10:30:15 PM	.101 : Site A09	4, L=TUGGERA	NONG, S=ACT, C=AU
CDA Sig	gn File Information Signing Time : Approver Person Id : Approver Person Name : anisation Certificate Subject : Valid From : Valid To :	2017-10-06T06:25:27.16337712 http://ns.electronichealth.net.au/id/hi/hpii/1.0/8003610000021 Doctor Good Smith This is not a NASH Certificate CN=Test Site A094 :9981466254, OU=Test Site A094, O=Test 11/05/2015 10:30:15 PM 11/05/2020 10:30:12 PM	.101 : Site A09	4, L=TUGGERAJ	NONG, S=ACT, C=AU

Figure 39 - An unrecognised type of certificate and a second eSignature

## 3.7.5 Template Validation Report tab

The **Template Validation Report** tab displays the results of the My Health Record template validation (for which the Validator may be used) and the clinical document XML file (Figure 40).

File :	C: \Users\User\Desktop\EReferral_3A_Max.hl7	6	O MHR	Run Conformance
			P2P	Show Report
Template:	e-Referral 1A (1.2.36.1.2001.1006.1.21000.13 ver 32624)	~		
Addn Rules:	Select additional rules template folder for validation			Run Addn Rules Only

Figure 40 - Template Validation Report tab

Any template validation issue is displayed in this report along with information about the issue, and the context of the issue. A template validation report is generated each time the Validator is run.

Schema issues are displayed before Schematron issues, followed by a display of the clinical document XML file. Figure 41 shows a report with a schema issue highlighted.

File Configuration Help					
File : C: \Users\User\Desktop\ER	teferral_3A_Max2.zip		MHR P2P	Run Conformance	Load and Validate XDS Metadata
Template: e-Referral 1A (1.2.36.1.20	01.1006.1.21000.13 ver 32624) V	1 '			
Addn Rules: Select additional rules temp	plate folder for validation			Run Addn Rules Only	
Information Rendered Document Sign F	ile   Sign File Information   Template Validation Report   Package Report   Re	eference Sets	Other Terminolog	y Aspects	
		Templ	ate Valid	ation Report	^
VALIDATION STATUS	Complete				
SERVICE NAME	e-Referral - 1A				
SERVICE PROVIDER	Australian Digital Health Agency				
SERVICE PROVIDER					
STANDARD TYPE	CDA K2				
DATE OF TEST	17:07:00 +11:00				
	1/:2/:28 +11:00				
RESULT OF TEST	False				
ISSUE COUNT	1 Con Dealance Dealant Tab				
SIGNATORE VALIDATION	See Package Report Tab				
<					>
			Schema Vi	olations	
# Message					C .
1 (Line:5 Pos:4) The eleme	ent 'ClinicalDocument' in namespace 'urn:hl7-org:v3'	has inva	lid child elem	ent 'typeI' in namespa	ce 'urn:hl7-org:v3'. Lisi
typeId' in namespace 'ur	rn:hl7-org:v3'.				_
			T		
			l est Ol	bject	
<clinicaldocument td="" xmlns<=""><td>:ext="http://ns.electronichealth.net.au/Ci/Cda/</td><td>Extensio</td><td>ons/3.0" xm</td><td>lns:xsi="http://www.</td><td>w3.org/2001/XMLSchema</td></clinicaldocument>	:ext="http://ns.electronichealth.net.au/Ci/Cda/	Extensio	ons/3.0" xm	lns:xsi="http://www.	w3.org/2001/XMLSchema
<typei extension="POCD_HD000040" root="2.16.840.1&lt;/td&gt;&lt;td&gt;.113883.1.3"></typei>					
<pre><templateid <="" <templateid="" pre="" root="1.2.3"></templateid></pre>	6.1.2001.1001.100.149" extension="1.0"/>	·			
<id root="2.25.20297408&lt;/td&gt;&lt;td&gt;5433639219315885974423396617341"></id>				~	
<pre>////////////////////////////////////</pre>					> ~
					-

Figure 41 - Template Validation Report tab with schema issue highlighted

File : C:\Users\User\Desktop	2)EReferral_3A_Max2.zp	<b>a</b>	MHR P2P	Run Conformance Show Report	Load and Validate XDS Metadata
erheienar in (1.2.30.1	1.2001.1000.1.21000.13 Vel 32024)			Res Alls Relation	
don Rules: Select additional rules t	template folder for validation	-		Run Addn Rules Only	
mation Rendered Document Si	gn File   Sign File Information   Template Validation Report   Package Report	Reference Sets	Other Terminolog	y Aspects	
		Temp	late Valio	lation Report	
ALLOATION STATUS REVICE PROVIDER TANDARD TYPE ATE OF TEST IME OF TEST SSUE COUNT IGNATURE VALIDATION	Complete e-Referral - 1A Australian Digital Health Agency CDA R2 06-Oct-2017 17:27:28 +11:00 False 1 See Package Report Tab				;
# Message			Schema Vi	olations	
1 (Line:5 Pos:4) The ele typeId' in namespace	ement 'ClinicalDocument' in namespace 'urn:hl7-org 'urn:hl7-org:v3'.	v3' has inv	alid child elerr	nent 'typeI' in namespac	:e 'urn:hl7-org:v3'. List
			Test 0	bject	
<clinicaldocument xml<br=""><typei 1.2<br="" root="2.16.840&lt;br&gt;&lt;templateId root="><templateid <br="" ci="" http:="" ns.electronichealth.net.au="" root="1.2&lt;/td&gt;&lt;td&gt;&lt;pre&gt;ns:ext=">.1.113883.1.3" extension="POCD_HD00040"/&gt; .366.1.2001.1001.101.100.1002.2" extension="2. .366.1.2001.1001.100.149" extension="1.0"/&gt;</templateid></typei></clinicaldocument>	Cda/Extensi 2"/>	.ons/3.0" xm	lns:xsi="http://www.w	<pre>r3.org/2001/XMLSchema</pre>	

Figure 42 shows the report with Schematron issues highlighted.

Figure 42 - Template Validation Report tab with Schematron errors highlighted

Figure 43 shows a report where no schema or Schematron issues were found during template validation.

File Configuration Help	
File : C:\Users\User\Desktop\	EReferral_3A_Max1.zp       O MHR     O P2P     Show Report
Template: e-Referral 3A (1.2.36.1.	2001.1006.1.21000.11 ver 144) V
Addn Rules: Select additional rules te	emplate folder for validation
Information Rendered Document Sign	n File Sign File Information Template Validation Report Reference Sets Other Template Validation Report
	Template Validation Report
VALIDATION STATUS	Complete
SERVICE NAME	e-Referral - 3A
SERVICE PROVIDER	Australian Digital Health Agency
STANDARD TYPE	CDA R2
DATE OF TEST	06-Oct-2017
TIME OF TEST	17:41:52 +11:00
RESULT OF TEST	True
ISSUE COUNT	0
SIGNATURE VALIDATION	See Package Report Tab
<	>
	Test Object
<tvpeid 3.0"="" ci="" cue="" ms.fiectronicnemet.au="" ntcp:="" root="2.16.840&lt;/td&gt;&lt;td&gt;&lt;pre&gt;bistext=" stchisions="" td="" x<="" xmins:xsi="ntcp://www.ws.org/2001/Anisonema=instance"></tvpeid>	
<templateid extension="2.2" root="1.2.&lt;/td&gt;&lt;td&gt;36.1.2001.1001.101.100.1002.2"></templateid>	
<templateid extension="1.0" root="1.2.&lt;/td&gt;&lt;td&gt;36.1.2001.1001.109.149"></templateid>	
<id 2:16.540.1.113653.6.1"="" codesystemwame="formt" displaywame="kelenal hote" root="2.25.2029740&lt;/td&gt;&lt;td&gt;&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;&lt;pre&gt;&lt;title&gt;e-Referral&lt;/tit&lt;/pre&gt;&lt;/td&gt;&lt;td&gt;blesystem="></id>	
<effectivetime value="&lt;/td&gt;&lt;td&gt;20170621085945+1000"></effectivetime>	
<confidentialitycode n<="" td=""><td>aulflavor="NA"/&gt;</td></confidentialitycode>	aulflavor="NA"/>
<languagecode 06687084-<="" code="en&lt;/td&gt;&lt;td&gt;&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;vseuld root=" td=""><td>10437-1012-10(5-15/E/01000D1-//</td></languagecode>	10437-1012-10(5-15/E/01000D1-//
<	>

Figure 43 - Template Validation Report tab reporting no errors

The upper portion of the report includes a summary of the schema and Schematron errors, and contains the following information.

Label	Description
Validation status	<b>Complete</b> indicates the Validator has completed the validation process. If the Validator does not complete the validation process, the text <b>An Error occurred while trying to run the Validator. No Output was produced.</b> will be displayed.
Service name	The type of the clinical document and the target conformance level.
Service provider	Australian Digital Health Agency
Standard type	HL7 CDA R2 indicates the clinical document specifications are based on release 2 of the <i>HL7 Clinical Document Architecture</i> [HL72004].
Date of test	The date in the dd-mmm-yyyy format.
Time of test	The time when the test was run.
Result of test	The overall result of the validation. The result is True if template validation found no issues, and False if issues were found during template validation.
Issue count	The total number of schema and Schematron issues.
Signature validation	Indicates whether any errors were found in the eSignature. "N/A" is displayed if there was no eSignature. "See Package Report Tab" is displayed if there was an eSignature to validate.

Table 8 - Report labels

If schema issues are found, the middle portion of the report contains the XML line number where the issue is located, the position of the issue within the line, and a description of the issue (Figure 41).

If Schematron issues are found (Figure 42), the middle portion of the report contains the information in Table 9.

Label	Description
#	The issue number.
Message	The issue message.
Context	The location in the XML where the issue was found (XPath).
Test	The <b>Go To Issue</b> link at the end of the test information can be used to go to the location of the issue in the clinical document XML file.

Figure 44 is an example of information that is displayed in the **Template Validation Report** tab when a **Go To Issue** link is selected. The issue message highlighted in red indicates the XML element that was in issue.

File Config	uration Help							
File :	E:\DigitalHealth\CDA	A\ExampleSHSwithDVA.xm			6	MHR P2P	Run Conformance	Load and Validate XDS Metadata
Template:	e-Discharge Summa	ry 1A (1.2.36.1.2001.100	.1.20000.13 ver 31147)	~				
Addn Rules:	Select additional rule	es template folder for valid	ation				Run Addn Rules Only	
Information R	tendered Document	Template Validation Report	Package Report Reference Se	ets Other Terminology A	spects			
				Т	empla	ate Valio	lation Report	
VALIDATI SERVICE SERVICE STANDAR DATE OF TIME OF RESULT C ISSUE CC SIGNATUR	ON STATUS NAME PROVIDER D TYPE TEST TEST DF TEST DUNT RE VALIDATION	Complete Shared Heal Australian D CDA R2 06-Oct-201 16:40:57 +: False 3 N N/A	th Summary - 1A igital Health Agency 7 0:00					
<								>
Issue #1 Top <typei <templ <templ <id ro<="" th=""><td>- count(cda:ten d root="2.16 ateId root=" ateId root=" ot="2.25.932</td><td>nplateId[@root = '1. .840.1.113883.1. 1.2.36.1.2001.10 1.2.36.1.2001.10 1946905869373680</td><th>2.36.1.2001.1001.101.10 3" extension="POCD_F 01.101.100.1002.120" 01.100.149" extensio 6932555453532442281"</th><td>00.1002.4' and @ext 10000040" /&gt; " extension="1.4' on="1.0" /&gt; " /&gt;</td><td>ension='3 " /&gt;</td><td>.4'])&gt;0</td><td></td><td>^</td></id></templ </templ </typei 	- count(cda:ten d root="2.16 ateId root=" ateId root=" ot="2.25.932	nplateId[@root = '1. .840.1.113883.1. 1.2.36.1.2001.10 1.2.36.1.2001.10 1946905869373680	2.36.1.2001.1001.101.10 3" extension="POCD_F 01.101.100.1002.120" 01.100.149" extensio 6932555453532442281"	00.1002.4' and @ext 10000040" /> " extension="1.4' on="1.0" /> " />	ension='3 " />	.4'])>0		^
Issue #2 Top Issue #3 Top <code< th=""><td>- @code = '188 - translate(@di code="60591-</td><td>42-5' splayName, 'abcdef 5" codeSystem="2</td><th>)hijklmnopqrstuvwxyz', 'A 16.840</th><td>BCDEFGHIJKLMNOPC</td><td>RSTUVW</td><td>(YZ') = 'DISC " displayl</td><td>CHARGE SUMMARIZATION M</td><td>NOTE' '" /&gt;</td></code<>	- @code = '188 - translate(@di code="60591-	42-5' splayName, 'abcdef 5" codeSystem="2	)hijklmnopqrstuvwxyz', 'A 16.840	BCDEFGHIJKLMNOPC	RSTUVW	(YZ') = 'DISC " displayl	CHARGE SUMMARIZATION M	NOTE' '" />

Figure 44 - Template Validation Report tab when a Go to Issue link is selected

Figure 45 shows the display of a clinical document XML file. The clinical document XML file is presented immediately after the display of any Schematron issues.

rie :	E:\DigitalHealth\C	DA Example SHSwith DVA. xm	4		0	MHR	Run Conformance	Load and Validate XDS Metadata	
						() P2P	Show Report		
remplate:	e-Discharge Sum	sary 1A (1.2.36.1.2001.100	5.1.20000.13 ver 31147		~				
ddn Rules:	Select additional m	les template folder for valid	lation				Run Addn Rules Only		
ormation	Rendered Document	Template Validation Report	Package Report R	eference Sets Other T	erminology Aspects				
					Temp	late Valio	dation Report		
VALIDA	TION STATUS	Complete							
SERVIC	E NAME	Shared Hea	Ith Summary - 1A						
SERVIC	E PROVIDER	Australian D	igital Health Ager	ncy					
STAND	ARD TYPE	CDA R2							
DATE O	F TEST	06-Oct-201	7						
TIME O	F TEST	16:40:57 +	10:00						
RESULT	OF TEST	False							
ISSUE (	COUNT	3							
SIGNAT	URE VALIDATIO	N N/A							
<								_	>
	Carpocument	mins:ext-"nctp:/	/ns.electronic	nealun.neu.au/u	1/ CUA/ EXCENSI	UII3/3.0" XI	mins:xsi-"nccp://www.	w3.01g/2001/AnL3CHema-IH3Cance	- x
<a nam<="" td=""><td>ne="yyy1" xml</td><td>15=""&gt;</td></a>	ne="yyy1" xml	15="">					12 - 13 - 14 - 14 - 14 - 14 - 14 - 14 - 14		^
<rume1< td=""><td>Id root="2.16</td><td>.840.1.113883.1.3</td><td>" extension="P</td><td>OCD_HD000040"/&gt;</td><td></td><td></td><td></td><td></td><td>- 10</td></rume1<>	Id root="2.16	.840.1.113883.1.3	" extension="P	OCD_HD000040"/>					- 10
selber	ateId root="	1.2.36.1.2001.100	1.100.149" ext	ension="1.0"/>					- 11
<templ< td=""><td>ot="2.25.932</td><td>19469058693736806</td><td>93255545353244</td><td>2281"/&gt;</td><td></td><td></td><td></td><td></td><td></td></templ<>	ot="2.25.932	19469058693736806	93255545353244	2281"/>					
<templ <templ <id ro<="" td=""><td></td><td>ns=""&gt; <a nam<="" td=""><td>e="yyy3" xmlns</td><td>=""&gt;</td></a></td><td></td><td></td><td></td><td></td><td></td></id></templ </templ 		ns=""> <a nam<="" td=""><td>e="yyy3" xmlns</td><td>=""&gt;</td></a>	e="yyy3" xmlns	="">					
<templ <templ <id ro<br=""><a nam<="" td=""><td>ne="yyy2" xml</td><td></td><td>16.840.1.11388</td><td>3.6.1" codeSyst</td><td>emName="LOING</td><td>" displayN</td><td>ame="Patient summary".</td><td>/&gt;</td><td></td></a></id></templ </templ 	ne="yyy2" xml		16.840.1.11388	3.6.1" codeSyst	emName="LOING	" displayN	ame="Patient summary".	/>	
<templ <templ <id ro<br=""><a nam<br=""><code< td=""><td>code="60591-</td><td>o" codeSystem="2.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></code<></a></id></templ </templ 	code="60591-	o" codeSystem="2.							
<templ <templ <id ro<br=""><a nam<br=""><code <title< td=""><td>code="60591- &gt;Shared Heal</td><td><pre>codeSystem="2. th Summaryue="2016051115293</pre></td><td>&gt;</td><td></td><td></td><td></td><td></td><td></td><td></td></title<></code </a></id></templ </templ 	code="60591- >Shared Heal	<pre>codeSystem="2. th Summaryue="2016051115293</pre>	>						
<templ <templ <id ro<br=""><a nan<br=""><code <title <effec <confi< td=""><td>code="60591- &gt;Shared Heal tiveTime val</td><td>th Summary</td></confi<></effec </title =="2016051115293 ie nullFlavor="NA</code </a></id></templ </templ 	code="60591- >Shared Heal tiveTime val	th Summary	:> 00+1000"/> \"/>						
<templ <templ <id ro<br=""><a nam<br=""><code <title <effec <langu< td=""><td><pre>me="yyy2" xml code="60591- &gt;Shared Heal ctiveTime val dentialityCo tageCode code</pre></td><td>5" codeSystem="2. th Summary</td></langu<></effec </title ue="2016051115293 ie nullFlavor="NJ ="en-AU"/&gt;</code </a></id></templ </templ 	<pre>me="yyy2" xml code="60591- &gt;Shared Heal ctiveTime val dentialityCo tageCode code</pre>	5" codeSystem="2. th Summary	> 10+1000"/> "/>						
<templ <templ <id ro<br=""><a nam<br=""><code <title <effec <confi <langu <setid< td=""><td><pre>me="yyy2" xml code="60591- &gt;Shared Heal tiveTime val dentialityCo mageCode code i root="db291</pre></td><td><pre>b" codeSystem="2; th Summary</pre></td></setid<></langu </confi </effec </title ue="2016051115293 ie nullFlavor="NA ="en-AU"/&gt; ca3-cd65-4edd-a3e ====================================</code </a></id></templ </templ 	<pre>me="yyy2" xml code="60591- &gt;Shared Heal tiveTime val dentialityCo mageCode code i root="db291</pre>	<pre>b" codeSystem="2; th Summary</pre>	> 10+1000"/> "/> 9-1a8601783db4	"/>					~

Figure 45 - Template Validation Report tab displaying a clinical document XML file

## 3.7.6 Additional Rules Report tab

The **Additional Rules Report** tab displays the outcome of applying additional rules to the clinical document (Figure 46). This tab is only displayed if an additional template package was imported into the Validator (Section 3.2.3).

File Confi	guration Help			
File :	C:\Users\User\Desktop\EReferral_3A_Max1.zip	6	MHR	Run Conformance
			P2P	Show Report
Template:	e-Referral 3A (1.2.36.1.2001.1006.1.21000.11 ver 144) V			
Addn Rules:	C:\DigitalHealth\TP-IQRules_v1.4.9			Run Addn Rules Only
Information	Rendered Document   Sign File   Sign File Information   Template Validation Report   Additional Rules Report	Packag	ge Report Reference	Sets Other Terminology Aspects

Figure 46 - Additional Rules Report tab

Information is displayed in the **Additional Rules Report** tab in the same way as information is displayed in the **Template Validation Report** tab (Section 3.7.5).

## 3.7.7 Package Report tab

The **Package Report** tab displays the results of package validation (for which the Validator may be used) (Figure 47). This tab is only displayed after a clinical package or an HL7 MDM wrapped clinical package has been validated (Section 3.2.1).



Figure 47 - Package Report tab

The **Package Report** tab displays the validation result for each test case that was applied for the selected context, and a symbol that summarises each validation result (Figure 48). Section 2.1 provides information about these test cases.

File Configuration Help	
File : C: Users/User/Desktop/EReferral_3A_Max1.zp  C: Users/User/Desktop/EReferral_3A_Max1.zp  C P2P Show Report	s
Template: e-Referral 3A (1.2.36.1.2001.1006.1.21000.11 ver 144) V	
Addn Rules: C: \DigitalHealth\TP-IQRules_v1.4.9	
Information Rendered Document Sign File Sign File Information Template Validation Report Additional Rules Report Pacinge Report Reference Sets Other Template Validation Report	Override Results
CDA Packaging Validation	^
Test Date: 6/10/2017, 5:45:57 PM	
CDA XML Document	
PKG_CDA_014 - Verify the CDA Document is valid for its document type	_
Pas	0 🖌
PKG_CDA_015 - Verify any packaged attachments are represented using an ED-type element Pass Pass	
DKC_CDA_016 - Vaify the ED-type almost intentit/fack&locitim = "SUA-1"	
Pass	n 🧹
	✓ ▼
PKG CDA 017 - Verify the ED-type element contains a single cdareference element	~

Figure 48 - Package Report tab showing results of clinical package validation

Package validation symbols and their meanings are listed in Table 10.

Table 10 - Package validation :	symbols
---------------------------------	---------

Symbol	Explanation	Usage
<b>~</b>	Pass	The Validator determined a definite 'Pass' for the test case.
×	Fail	The Validator determined a definite 'Fail' for the test case.
<b>P</b>	Warning	The outcome of the test case can only be determined through manual inspection and then a decision of 'Pass' or 'Fail'.
×	Not Run	The test case is conditional (e.g. upon an attachment being present) and the validation was not run as the condition was not met.

## 3.7.8 Reference Sets tab

The **Reference Sets** tab (Figure 49) displays the results of validations of codes against reference sets where these are specified in the CDA implementation guide for the particular document type (see Section 2.3.1 for details).

File Config	uration Help			
File :	C:\Users\User\Pesktop\EReferral_3A_Max1.zip	6	MHR	Run Conformance
			P2P	Show Report
Template:	e-Referral 3A (1.2.36.1.2001.1006.1.21000.11 ver 144)			
Addn Rules:	C:\DigitalHealth\TP-IQRules_v1.4.9			Run Addn Rules Only
Information	Rendered Document   Sign File   Sign File Information   Template Validation Report   Additional Rules Report	Package	Report Reference	Sets Other Terminology Aspects

Figure 49 - Reference Sets tab

Reference set validation results are displayed for every data element for which the CDA implementation guide specifies a reference set in its 'Vocab' column. They include information that describes the validation result and a symbol representing this result (Figure 50Figure 50 - Reference Sets tab showing results of reference set validation).

File Configuration Help	
File : C:Users'User'Desktop'EReferal_3A_Max1.zp	
Template: e-Referral 3A (12.36.12001.1006.121000.11 ver 144)	
Addn Rules: C:/Digitahtealth/TP-IQRules_v1.4.9 🖻 Run Addin Rules Only	
Information Rendered Document Sign File Sign File Information Template Validation Report Package Report Reference Sets Other Terminology Aspects	
	Override Results
Terminology Validation	<b>^</b>
Pass Code Value = 86461001 CodeSystem = 2.16.840.1.113883.6.96 Display Name= Plant diterpane Calculated Name:/cda:ClinicalDocument[1]/cda:component[1]/cda:structuredBody [1]/cda:component[2]/cda:section[1]/cda:antry[1]/cda:att[1]/cda:participantRole[1]/cda:playingEntity[1]/cda:code[1] Adverse Reaction > Substance/Agent	~
Pass Code Value = 117491007 CodeSystem = 2.16.840.1.113883.6.96 Display Name= trans-Nonachlor Calculated Name:/cda:ClinicalDocument[1]/cda:component[1]/cda: [1]/cda:component[2]/cda:section[1]/cda:entry[2]/cda:set[1]/cda:participant[4]/cda:participant[4]/cda:participant[4]/cda:section[1]/cda:component[1]/cda:section[1]/cda:section[1]/cda:section[4]/section[4]/sectio	<b>~</b>
Adverse Reaction > Reaction Event > Manifestation	
Pass Code value = 21909001 CodeSystem = 2.16.840.1.113883.6.96 Display Name= Fetal viability Calculated Name:/cda:ClinicalDocument[1]/cda:component[1]/cda:comp	<b>~</b>
Adverse Reaction > Reaction Event > Manifestation	
Pass Code value = 15296000 CodeSystem = 2.16.840.1.113883.6.96 Display Name= Sterlity Calculated Name:/cda:ClinicalDocument[1]/cda:component[1]/cda:structuredBody[1]/cda:component [2]/cda:section[1]/cda:entry[1]/cda:entryRelationship[1]/cda:observation[1]/cda:cotael[1	nt 🗸
Adverse Reaction > Reaction Event > Manifestation	
Pass Code Value = 21909001 CodeSystem = 2.16.840.1.113883.6.96 Display Name= Fetal viability Calculated Name:/cda:ClinicalDocument[1]/cda:component[1]/cda:structuredBody	<b>~</b> ~

Figure 50 - Reference Sets tab showing results of reference set validation

Validation result symbols and their meanings are listed in Table 11.

Symbol	Explanation	Usage
<b>V</b>	Pass	All attributes of the data element have the expected value.
×	Fail	A code of the required type was found but did not have the expected value, or the display name was not correct.
-	Warning	An attribute of the data element does not have the expected value and the test result can only be determined through manual inspection and then a decision of 'Pass' or 'Fail'.
-	Not Run	The data element is either not present or does not contain terminology codes.

If the conformance level is 3B, the Validator reports a Fail (🗱) if a clinical document does not use the code set specified in the 'Vocab' column of the relevant CDA implementation guide.

For all conformance levels, the Validator reports a Fail ( $\thickapprox$ ) if:

- the value of a code does not exist in the terminology reference set specified in the relevant CDA implementation guide; or
- the display name of a code in a clinical document does not match that code's display name in the terminology reference set.

For all conformance levels, the Validator reports a Warning ( For ) if:

- the code system name in a clinical document is not the name specified for that code system; or
- the clinical document contains a code from a code system that is not supported by the Validator.

## 3.7.9 Other Terminology Aspects tab

The **Other Terminology Aspects** tab (Figure 51) displays the results of validating any codes within the clinical document (for which the Validator may be used) that are members of the code systems listed in Table 1.

File Config	guration Help			
File :	C:\Users\User\Desktop\EReferral_3A_Max1.zip		MHR	Run Conformance
			P2P	Show Report
Template:	e-Referral 3A (1.2.36.1.2001.1006.1.21000.11 ver 144)			
Addn Rules:	C:\DigitalHealth\TP-IQRules_v1.4.9	$\square$		Run Addn Rules Only
Information	Rendered Document   Sign File   Sign File Information   Template Validation Report   Additional Rules Report	Package	Report Reference S	Sets Other Terminology Aspects

Figure 51 - Other Terminology Aspects tab

Information is displayed in the **Other Terminology Aspects** tab in the same way as information is displayed in the **Reference Sets** tab (Section 3.7.8).

## 3.8 Override Results command

After the validation has been performed (for a purpose for which the Validator may be used), the **Override Results** command is displayed in the **Terminology Report** tab (Figure 52).



Figure 52 - Override Results command displayed in Other Terminology Aspects tab

The Validator allows the user to override package and code validation results. This is useful for tests that may result in a 'Warning' rather than a 'Pass' or a 'Fail'. A 'Warning' is displayed when the outcome of a test can only be determined by manual inspection.

The Validator allows a user to manually change a test result when a 'Warning' message is displayed. Although the purpose of this command is to allow a user to override a 'Warning' test result, the command also allows the user to override a 'Pass' or 'Fail' result. Overriding a 'Fail' result may result in an overall 'Pass' being reported in the test report although the My Health Record system may reject the clinical document when it is uploaded.

By selecting **Override Results**, a new window that allows the user to select the code validation result to be overridden is displayed (Figure 53).



Figure 53 - Overriding a code validation result

The XPath column contains the value of the code, the code system object identifier, the value of the display name, and the location of the data element that contains the code.

The user can manually record a new result and the reason for the change (Figure 54).

**Note:** To avoid processing errors, double quotation marks ("") should be used rather than single quotes (") to record the reason for the change. For example, "SNOMED CT-AU" should be used rather than 'SNOMED CT-AU'.

Failed	d Passed Warning					
	XPath	AssessmentComments	ActualResult	OverrideResult		
.0	Code Value = 430698003 Code System = 2.16.840.1.113883.6.96 Display Na	The actual name of SNOMED is close enough to the expected value of SNOMED CT-AU	Warning	Warning	-	
	Code Value = 399208008 Code System = 2.16.840.1.113883.6.96 Display Na		Warning		-	
	Code Value = 426496006 CodeSystem = 2.16.840.1.113883.6.96 Display N		Warning		-	
	Code Value = 80313002 CodeSystem = 2.16.840.1.113883.6.96 Display Na		Warning		-	
			- 1		ŝ	

Figure 54 - Recording a new code validation result and the reason for the change

The override changes the overall test result displayed on the Validator's **Information** tab (Section 3.7.1).

## 3.9 Show Report command

The **Show Report** command (Figure 55) allows a user to request the Validator to create a test report (for which the Validator may be used). It also creates an HTML file that is a rendered view of the clinical document that has been validated.

File Configu	uration Help			
File :	C:\Users\User\Desktop\EReferral_3A_Max1.zip		MHR P2P	Run Conformance
Template:	e-Referral 3A (1.2.36.1.2001.1006.1.21000.11 ver 144)		0.1	Show Report
Addn Rules:	C:\DigitalHealth\TP-IQRules_v1.4.9	$\mathbf{\widehat{\Box}}$		Run Addn Rules Only
Information R	endered Document   Sign File   Sign File Information   Template Validation Report   Additional Rules Report	Package F	Report Reference S	Sets Other Terminology Aspects

Figure 55 - Requesting the Validator to create a test report

The Validator also provides the user with the option of entering information about the tests performed including the name of the author and tester; the names of the software development and tester organisations; and information about the software being tested and the test environment (Figure 56). This information is remembered and does not need to be re-entered every time the Validator is used.

[] Conformance Report Information		x
Report Details		
Author Name:		
Software Development Organisation:		
Report Identifier:		
Developer Name:		
Name of implementation under test:		
Version of implementation under test:		
Test environment:		
Location of assessment (address):		
Tester name:		
Tester organisation:		
Other information:		
	Continue	;el

Figure 56 - Recording information about the tests performed

The test report is in Adobe PDF format and contains:

- assessment details, such as the conformance level, context and template ID;
- a list of terminology codes used;
- a summary of the validation test results;
- a detailed error report for each type of validation;
- a reference to the HTML file containing the rendered view of the clinical document that has been validated; and

The PDF file is saved and is located in the same directory from which the target file has been selected.

The summary of the validation test results shows the overall result and the total number of issues and warnings reported by the Validator (Figure 57).

**Note:** If there are warnings but no issues, the overall test result recorded is a 'Pass', as shown in the 'Overall result' for the 'Other Terminology Validation' in Figure 57.

	Overall result	Error count	Warning count	Comments
Template Validation	×	2	0	
Package Validation	×	12	0	
Terminology Validation	×	1	10	
Other Terminology Validation	<b>~</b>	0	4	
Additional Rules Validation	-	0	0	



If a validation result is overridden before the test report is generated, the report records the original result, the new result, and the reason why the original result was overridden (Figure 58). The Validator uses the new result when it produces the summary of validation results in the test report.

#	CodeSet/Code/Name	Comment	Resul t	Overr ide
1	Code Value = 73817000 CodeSystem = 2.16.840.1.113883.6.96 Display Name= Enteritis due to radiation	The actuial codeSystemName value "SNOMED" is close enough to the expected value "SNOMED CT-AU"	Warni ng	Pass
	Calculated XPath:/cda:ClinicalDocument[1]/cda:component[1]/cda:struct uredBody[1]/cda:component[1]/cda:section[1]/cda:component [1]/cda:section[1]/cda:entry[1]/cda:observation[1]/cda:value[ 1]			

Figure 58 - Record of an overridden test result in a test report

## 3.10 Cumulative report of test results

The Validator creates a cumulative report of test results in the file report.csv which is located in the same directory as where the target file has been selected from. A new row is added to this file each time a clinical document or clinical package (for which the Validator may be used) is validated. The information recorded in this file is listed in Table 12.

Label	Description
Input File Name	The filename of the clinical document or clinical package that was validated.
Test Date	The date and time the file was assessed by the Validator.
Template Name	The name of the My Health Record template package as recorded in the template package metadata.
Template ID	The identifier of the My Health Record template package as recorded in the template package metadata.
Template Version	The version number of the My Health Record template package as recorded in the template package metadata.
Template Effective Date	The date the My Health Record template package was approved as recorded in the template package metadata.
Conformance Level	The conformance level as recorded in the template package metadata.
Test Context	The value is either 'MHR' or 'P2P'.
Package Errors	The number of clinical package errors.
Package Warnings	The number of clinical package warnings.
Template Errors	The number of errors reported by applying the My Health Record template package.
Template Warnings	The number of warnings reported by applying the My Health Record template package.
	<b>Note:</b> template packages in the My Health Record system do not report warnings.
Additional Rules Issues	The number of issues reported by applying the additional template package.
Additional Rules Warnings	The number of warnings reported by applying the additional template package.
Reference Set Errors	The number of errors reported by applying reference set validation (Section 2.3.1).
Reference Set Warnings	The number of warnings reported by applying reference set validation (Section 2.3.1).
Other Terminology Errors	The number of errors reported when validating codes from supported code systems.

Table 12 - Information in the report.csv file

Label	Description
Other Terminology Warnings	The number of warnings reported when validating codes from supported code systems.
Summary	An overall Pass or Fail.

The Validator also creates an analysis report of test results in the file analysis.csv which is located in the same directory as where the target file has been selected from. A new row is added to this file for each result reported for a clinical document being validated so there may be 0 or more rows returned depending on the issues found. The information recorded in this file is listed in Table 13.

Label	Description
Document Creation Date	The date the document was created (effectiveTime).
Document Creation Time	The time the document was created (effectiveTime).
Error ID	<empty></empty>
Priority	The priority level of issue raised.
Error Type	Whether the issue is from a template package or conformance set of rules (Conformance or Template).
Error Classification	Classification type of issue raised (ERROR, HINT, RECOMMENDATION, FINDING, WARNING).
Document Type	CDA document type.
Conformance Level	The level of conformance for which the document is being tested.
Template Package ID	Template package ID being used to test the document.
Document Id	The id of the document (id root).
Site Impacted in Sample	The Organisation that authored the document.
Error	The error reported.
Conformance Specification	<empty></empty>
Guidance	<empty></empty>
XML Evidence	<empty></empty>
Proposed Vendor Action	<empty></empty>
Timeframe for Completion	<empty></empty>
Expected Version Containing Fix	<empty></empty>

Many of the fields may be empty as this analysis report is used by the conformance team to record and analyse issues.

## 3.11 Load and Validate XDS Metadata

The **Load and Validate XDS Metadata** command allows a user to request the Validator to test a SOAP upload document xml file and run a series of tests that the My Health Record system also performs when uploading a document (Figure 59).

File:     E: [DigitalHealth\CDA\ExampleSHSwitbDVA.xml       Image: Discharge Summary 1A (12.36.1.2001.1006.1.2000.013 ver 31147)	File Conf	iguration Help				
Template: e-Discharge Summary 1A (1.2.36.1.2001.1006.1.2000.13 ver 31147)	File :	E: DigitalHealth \CDA \ExampleSHSwithDVA.xml		MHR P2P	Run Conformance	Load and Validate XDS Metadata
	Template:	e-Discharge Summary 1A (1.2.36.1.2001.1006.1.20000.13 ver 31147)				
Addn Rules: Select additional rules template folder for validation	Addn Rules:	Select additional rules template folder for validation	$\square$		Run Addn Rules Only	

Figure 59 - Requesting the Validator to load and validate a soap upload document request

This function would generally be used when a user is experiencing problems uploading a document to the My Health Record system and getting the generic error message "PCEHR\_ERROR\_3002 - Document metadata failed validation".

In order to use this command, the user must have captured the SOAP request message that is sent to the My Health Record system and saved as an xml file.

The SOAP message can come in two formats:

- where the document is contained within the xml file as a base64 string
   </registryObjectList>
   </re
- or as a reference to the document when the sent as in MTOM format. For this format, the Validator will also prompt the user to select the CDA Package (zip) that was sent in order to complete the tests it runs.



The screenshot below (Figure 60) shows the result of having selected a SOAP message to validate. The example shows the IHI's have not matched.

The screen details show:

- the certificate that signed the SOAP message;
- the XDS Metadata that was included with the CDA document;
- the custom SOAP Header data; and
- a Report summary of the tests carried out.

congulation hep				
File : E:\DigitalHealth\CDA\ExampleSHSwithDVA.xml	6	MHR     P2P	Run Conformance	Load and Validate XDS Metadata
mplate: e-Discharge Summary 1A (1.2.36.1.2001.1006.1.20000.13 ver 31147)	~	0.1	Show Report	
n Rules: Select additional rules template folder for validation	6		Run Addn Rules Only	
iepot DS Metadata Report Signing Cert Details				
<pre>Sign Cert DN : C(Hegemeral.00385203385432.id.electronichealth.net.au, Or Sign Cert Hip: 00365203385432 XdS Metadata CreationTime : 20170620230015 serviceStarTime : 20170620230015 serviceStarTime : 20170620230015 serviceStarTime : 20170620230015 serviceStarTime : 20170620230015 suthorPresent : Suth'God'~Doctor~1.2.36.1.2001.1003.0.80036203 authorPresent : Suth'God'~Doctor~1.2.36.1.2001.1003.0.80036203 authorPresent : Suth'God'~Doctor~1.2.36.1.2001.1003.0.80036203 authorPresent : Suth'God'~Doctor~1.2.36.1.2001.1003.0.80036203 authorPresent : Suth'God'~Doctor~1.2.36.1.2001.1003.0.80036203 authorPresent : Suth'God'~Doctor~1.2.36.1.2001.1003.0.80036203 bthcarSec11sy7gp : 2601. (Boppedis (secomp FayChitzic Hospitals)) patientId : 20034033425777~1.2.36.1.2001.1003.0.800362033 subhuthorPresent : Suth'God'~Doctor~1.2.36.1.2001.1003.0.800362033 subhuthorPresent : Suth'God ~Doctor~1.2.36.1.2001.1003.0.800362033 subhuthorPresent : Suth'God ~Doctor~1.2.36.1.2001.1003.</pre>	+MEDTESTORG 33352432 S6666709615 Relaxed) hospitals) 33352432 36666709615	SB115, DC=000	36620233352432, DO=id, DC SOAP Header HEIT Id Type : HEIT Id Type : 0003 Unit Numb: 0003 Org Id : 0003 Org Name : Medi HeID's Match in Head HPID's Match in XDS is Service Start and S	Delectronichealth, DCmmet, DCmau 616566667096 979 Marschle 60866701594 A A HIPS ows 620233551492 care306 Hr, XDS and CDA document: False and CDA document: True ader and Signing Cert: True and CDA document: True top time are volid: True

Figure 60 - Requesting the Validator to load and validate a soap upload document request

The tests that are performed are:

- 1 check that the file provided is a validate XML document;
- 2 the Soap message was signed;
- 3 the XDS Metadata was included;
- 4 the CDA Package was valid (zip file format); and
- 5 report the following test results:
  - a the IHI's Match in SOAP Header, XDS metadata and CDA document
  - b the HPI-I's Match in the XDS metadata and CDA document
  - c the HPI-O's Match in Header and Signing Cert
  - d the HPI-O's Match XDS metadata and CDA document
  - e the Service Start and Stop time are valid.

# 4 Examples of validation

This section provides examples to demonstrate how the Validator can be used to validate clinical documents and clinical packages (for which the Validator may be used). The Validator is a tool to assist users only and while it assists in testing conformance, it does not, and should not be relied upon to test all conformance specifications. Please refer further to the Clinical Package Validator Product Data Sheet and confirm your intended use with the Agency Help Desk on 1300 901 001.

## 4.1 Validate a 3A eReferral clinical package, My Health Record context

The following example shows how the Validator may be used to assess an eReferral clinical document within a clinical package for level 3A conformance in the My Health Record context.

1 If the Validator has been installed and configured but is not already launched, launch the Validator as follows.

If using Windows 7, navigate to **Start > All Programs > Agency > Clinical Package Validator**.

If using Windows 8 or above, click the Windows icon to open the Metro view and either search for "Clinical Package Validator" or visually locate the application menu.

The default screen will appear.

	Clinical Package Valio	dator v2.6		
Configuration Help				
File : Select an input file to validate	6	MHR  P2P	Run Conformance	Load and Validate XDS Metadata
plate:	~ ~		Pue Adda Pulsa Osla	
Rules: Select additional rules template rolder for validation	<b>u</b>		Run Addin Rules Only	
onfiguration and Runtime Information Template Package Document Type Template Package Name Template Package ID Conformance Level Template Package ID: Template Package ID Conformance Level Template Version Template Path: Template Version Template Path: Template Path Temp Work Path: C:DigitalHealth/CPV26\Temp Zip file size: Zip file size				

2 Click the Open File button () next to the File parameter and locate the clinical package to be validated, or drag the clinical package onto the **Information** tab or the **File** location field (Section 3.2.1).

3 If more than one eReferral template is imported in the Validator, select the relevant template for a level 3A eReferral.

#### The default context for validating a clinical package is My Health Record (Section 3.2.4). File Configuration Help

File :	E: \Sample documents \Section 4.1\eReferral.zip	6	MHR	Run Conformance
Template:	a-Referral 3A (1 2 36 1 2001 1006 1 21000 21 ver 32624)		○ P2P	Show Report
Addn Rules:	Select additional rules template folder for validation	6		Run Addn Rules Only
Information				

After the parameters for testing an eReferral for level 3A conformance in the My Health Record context have been selected, the **Information** tab provides detail about the clinical document and template package.

File Config	guration Help	
File :	E:\Sample documents\Section 4.1\eReferral.zip	<ul> <li>MHR</li> <li>P2P</li> </ul>
Template:	e-Referral 3A (1.2.36.1.2001.1006.1.21000.21 ver 32624)	
Addn Rules:	Select additional rules template folder for validation	
Information		
Configu	ration and Runtime Information	

#### 4 Click the **Run Conformance** button to perform the validation.

File :	E:\Sample documents\Section 4.1\eReferral.zip		MHR	Run Conformance
			O P2P	Show Report
Template:	e-Referral 3A (1.2.36.1.2001.1006.1.21000.21 ver 32624)	~		
Addn Rules:	Select additional rules template folder for validation			Run Addn Rules Only
Addn Rules:	Select additional rules template folder for validation			Run Addn Rules

## 5 The **Information** tab shows a summary of the validation results.

In this example there are 0 template errors, 7 CDA Package errors, 1 reference set errors, and 3 warnings for Other Terminology Aspects.

File : G:\Prog guide fig	ram and Projec jures and samp	t Documents\26 CCA\CDA \ le documents\Sample docur	alidator development\CP Validator 2.3\Manua nents\Section 4.1\eReferral.zip	s\User	MHR	Run Conformance	Load and Validate XDS
					○ P2P	Show Report	Freedota
e-Refen	ral 3B (1.2.36.1	.2001.1006.1.21000.22 ver	32624)	~			
h Rules: Select a	dditional rules t	emplate folder for validation				Run Addn Rules Only	
mation Rendered I	Document Sig	n File Sign File Information	Template Validation Report Package Repo	t Reference Set	Other Terminolog	y Aspects	
Configuration	and Runti	me Information					
	Templat	e Package			Files found i	n zip file:	
Docu	ment Type:	e-Referral			IHE_XDM/SUB	SET01/CDA_SIGN.XML	
Template Pack	age Name: Package ID:	e-Referral 1.2.36.1.2001.1006.1.	21000.22		IHE_XDM/SUB	SET01/x-ray.jpg SET01/CDA_ROOT.XML	
Conform	ance Level:	3B					
Template Effe	te Version:	Monday, 1 April 2013 32624					
Tem	plate Path: Work Path:	D:\DigitalHealth\CPV2	5\Templates\1.2.36.1.2001.1006.1.210	00.22.32624			
Z	ip file size:	42.34 KB	Arenip.				
					Validation S	ummary	
					Tanalata Malid		
					Pac	age Results: 7 Errors	
					Reference Other Termine	Set Results: 1 Errors logy Results: 0 Errors 3 1	Namings
					ould remain	logy results. O Errors 5 1	runnig.

6

## The Rendered Document tab displays a rendered view of the validated eReferral.

guide figures and sample documents \Sample documents \Section 4.1 \Referral.zip	als (User	MHR	Run Conformance	Load and Validate XDS
		O P2P	Show Report	rictudeta
e-Referral 3B (1.2.36.1.2001.1006.1.21000.22 ver 32624)	$\sim$			
dn Rules: Select additional rules template folder for validation			Run Addn Rules Only	
rmation Rendered Document Sign File Sign File Information Template Validation Report Package Rep	ort Reference Sets	Other Terminolo	gy Aspects	
lack Forward		1		
e-Referra	l			
6 Aug 2012				
Beau O REEFE DOB 6 Jun 2005 (7y) SEX Male 111 8003 6067	9000 0495			
START OF DOCU	MENT			
Jood Hospital				
uthor Doctor Henry Button (General Medical Practitioner)				
none 0345754566				
Referral Detail				
Referral Detail				
Referral Detail Vate and Duration Date Dura Duration Dura	tion			
Referral Detail Pate and Duration Date Dur 12 Dec 2011 16:10+1000 6 mc	<b>tion</b> nth			
Referral Detail Date and Duration Date Dura Date Dura Date Dura Date Dura Comparison Dura Date Dura Comparison Dura Dura Dura Dura Dura Dura Dura Dura	<b>tion</b> nth			
Prome 0343754566  Referral Detail  Date and Duration  Date Dura  Date Dura  Date Dura  Date Dura  Comparison Dura  Dura Dura	tion nth e. He injured th	e knee whilst o	lisembarking from an aircraft	: at work.
Referral Detail Date and Duration Date Date Dura Date Dura Date Dura Date Dura Date Dura Date Dura Dura Date Dura Dura Dura Dura Dura Dura Dura Dura	tion nth e. He injured th extent of his inj	e knee whilst c ury.	lisembarking from an aircraft	t at work.
Referral Detail Date and Duration Date Date and Duration Date Date Dura Date Date Date Date Date Date Date Dat	tion nth e. He injured th extent of his inj	e knee whilst c ury.	lisembarking from an aircraft	: at work.
Referral Detail State and Duration Date Date Dura Date Date Date Date Date Date Date Dat	tion nth e. He injured th extent of his inj tions	e knee whilst c ury.	lisembarking from an aircraft	: at work.
Referral Detail Pate and Duration Date Date Date Date Date Date Date Date	tion nth e. He injured th extent of his inj tions B hours as neede	e knee whilst c ury. ed. Do not exc d-release or en	lisembarking from an aircraft eed 4 within 24 hours. Do nc teric-coated tablet. Swallow	t at work. ht crush, chew, the pill whole.
None         0345/54566           Referral Detail         State and Duration           Date         Dura           Date         Dura           12 Dec 2011 16:10+1000         6 mc           teason for Referral         Thank you for seeing this 7 year old Qantas baggage handler with pain in his Left kne           Medications         Hedications           Hedications         Direc           maproxen 250 mg tablet, 50         6 to or br           tramadol hydrochloride 50 mg capsule, 20         Ever	tion nth e. He injured th extent of his inj tions 8 hours as need eak an extende of to 6 hours n	e knee whilst c ury, ed. Do not exc d-release or en ot to exceed 41	lisembarking from an aircraft eed 4 within 24 hours. Do n teric-coated tablet. Swallow 30 mg per day	t at work.

#### End

## 4.1.1 View information about the eSignature file

The **Sign File Information** tab displays information about the primary eSignature file of the clinical package (Figure 61).

File Confi	iguration Help				
File :	G: \Program and Project Docu guide figures and sample doc	ments\26 CCA\CDA Validator development\CP Validato ments\Sample documents\Section 4.1\eReferral.zip	r 2.3\Manuals\User	MHR	Run Conformance
	1			O P2P	Show Report
Template:	e-Referral 3B (1.2.36.1.2001	1006.1.21000.22 ver 32624)	$\sim$		
Addn Rules:	Select additional rules templa	e folder for validation			Run Addn Rules Only
Information	Rendered Document Sign File	Sign File Information Template Validation Report	Package Report Reference Set	S Other Terminolog	y Aspects
CDA Si	gn File Information –				
	Signing Time : Approver Person Id : Approver Person Name :	2012-08-07T06:29:48.7091593Z http://ns.electronichealth.net.au/id/hi/hpii/1. Doctor Henry Button	0/8003615833334118		
Org	anisation Certificate	This is not a NASH Certificate			
	Subject : Valid From : Valid To : Certificate Policies :	CN=bay-hill-hospital.nehta.net.au, O=NEHTA 13/07/2012 9:08:13 PM 7/07/2013 10:00:00 AM Policy not recognised	, DC=ELECTRONICHEALTI	H, DC=NET, DC=A	U
Other sig	nature files in package :				

Figure 61 - Sign File Information tab showing a summary of information about the primary eSignature file

This includes information about an approver's name and HPI-I, whether the PKI certificate had expired at the time of running the validation, and whether the PKI certificate is a NASH certificate.

The approver's name and HPI-I reported by the Validator in this tab can be used to check whether the healthcare software system is recording the same person as the approver of the clinical document.

In the above example, the Validator reported that the PKI certificate had expired when the validation was performed. This is not a problem if the certificate had not expired when the clinical document was signed.

In the above example, the Validator reported that the organisation certificate was not a NASH certificate. It is a requirement that all certificates used for signing clinical packages be NASH PKI certificates for healthcare provider organisations or NASH PKI certificates for supporting organisations. This error is also reported against the relevant test case in the **Package Report** tab.

The information displayed in the **Sign File Information** tab is usually the only information about the eSignature that is needed for validating a clinical document.

Additional information about the eSignature may be obtained by examining the CDA\_SIGN.XML file displayed in the **Sign File** tab. In the following example, the PKI certificate is displayed to the right of the <X509Certificate> XML tag (Figure 62).

File Conf	iguration Help				
File :	G:\Program and Project Documents\26 CCA\CDA Validator development\CP Validator 2.3\Manuals\User guide figures and sample documents\Sample documents\Section 4.1\eReferral.zip	6	MHR	Run Conformance	Load and Validate XDS Metadata
			○ P2P	Show Report	
Template:	e-Referral 3B (1.2.36.1.2001.1006.1.21000.22 ver 32624)				
Addn Rules:	Select additional rules template folder for validation			Run Addn Rules Only	
Information	Rendered Document Sign File Sign File Information Template Validation Report Package Report R	eference Sets	Other Terminolog	y Aspects	
- <signe - <sigr - <s - &lt;</s </sigr </signe 	<pre>JPayload xmins="http://ns.electronichealth.net.au/xsp/xsd/SignedPar atures&gt; gnature xmins="http://www.w3.org/2000/09/xmldsig#"&gt; SignedInfo&gt; <canonicalizationmethod 09="" 2000="" algorithm="http://www.w3.org/2001/10/xml&lt;br&gt;&lt;SignatureMethod Algorithm=" http:="" www.w3.org="" xmldsig#u<br=""><reference url="#1b37d9c2-7b7b-4848-bcfc-f54756a34fd2"> - <transforms> <transform 10="" 2001="" algorithm="http://www.w3.org/2001/10/xml-exc-c14&lt;br&gt;&lt;Transform Algorithm=" http:="" www.w3.org="" xml-exc-c14<br=""><transforms> <digestmethod algorithm="http://www.w3.org/2000/09/xmldsig#sl&lt;br&gt;digestMalue&gt;dPnQy4XYnp6AyPURpK/dVJQBNoo=&lt;/DigestValue&gt;&lt;br&gt;&lt;/Reference&gt;&lt;br&gt;//SignedInfo&gt;&lt;/pre&gt;&lt;/td&gt;&lt;td&gt;yload/20&lt;br&gt;-exc-c14&lt;br&gt;rsa-sha1&lt;br&gt;hn#"></digestmethod> ha1" /&gt;</transforms></transform></transforms></reference></canonicalizationmethod></pre>	10"> n#" /> ' />			
	SignatureValue>PeGOLXefhqj3y/YMiAkf83DnGuTLrvHdKmFax0XBOY	unhJ+wG	v5eKrxqwRT	AWtaR+piAhKAJ2QYsi	r7YCgGywAUlXvURg3rC
	<x509data></x509data>				
<t< td=""><td><x509certificate: miii4tccb8mgawibagietxqyktanbgkqhkig9w0<br=""> //keyInfo&gt; iginature&gt; natures&gt; edPayloadData id='1b37d9c2-7b7b-4848-bcfc-f54756a34fd2'&gt; 1:eSignature xmlns:q1="http://ns.electronichealth.net.au/cdaPackage/</x509certificate:></td><td>BAQUFA</td><td>DAxMQ5wCQ gnature/201</td><td>YDVQQGEwJBVTESMB</td><td>AGA1UEChMJTKVIVEFE</td></t<>	<x509certificate: miii4tccb8mgawibagietxqyktanbgkqhkig9w0<br=""> //keyInfo&gt; iginature&gt; natures&gt; edPayloadData id='1b37d9c2-7b7b-4848-bcfc-f54756a34fd2'&gt; 1:eSignature xmlns:q1="http://ns.electronichealth.net.au/cdaPackage/</x509certificate:>	BAQUFA	DAxMQ5wCQ gnature/201	YDVQQGEwJBVTESMB	AGA1UEChMJTKVIVEFE
	Manifest xmlns="http://www.w3.org/2000/09/xmldsig#">				~
<					>

Figure 62 - Sign File tab displaying the PKI certificate in the CDA\_SIGN.XML file

To examine the PKI certificate, use a text editor to copy and save it to a document with the '.cer' filename extension. Double-click to open the saved document and view the certificate (Figure 63 and Figure 64).

Certificate
General Details Certification Path
Certificate Information
Windows does not have enough information to verify this certificate.
Issued to: bay-hill-hospital.nehta.net.au
Issued by: SubCA
Valid from 13/ 07/ 2012 to 7/ 07/ 2013
Install Certificate Issuer Statement
ОК

Figure 63 - A view of the PKI certificate

Certificate	×
General Details Certification Path	1
Show: <all></all>	-
Field	Value
2 Valid from Valid to Subject Public key	Friday, 13 July 2012 11:08:13 Sunday, 7 July 2013 12:00:00 bay-hill-hospital.nehta.net.au, RSA (2048 Bits)
Authority Information Access	[1]Authority Info Access: Acc Server Authentication (1.3.6
Certificate Policies	[1]Certificate Policy:Policy Ide
1750 Subject Alternative Name	DNS Name=hav-hill-hosnital n
[1]Certificate Policy: Policy Identifier = 1.2.36, 1.2001 [1,1]Policy Qualifier Info: Policy Qualifier Id=CPS Qualifier:	.1002.1.3.1.4.3
http://policy.testsubmod1.pki.elect licy/NASH_HPIO_CP.pdf [1,2]Policy Qualifier Info:	ronichealth.net.au/testsubmod1/po
Ec	lit Properties Copy to File
L	ОК

Figure 64 - PKI certificate details

## 4.1.2 Display template validation results

To view the detailed template validation results, click the **Template Validation Report** tab (Figure 65) In this example, the error count was zero as no errors were found during template validation. The clinical document still needs to be manually inspected for conformance to requirements because not all conformance tests can be specified in a template (Section 2.2.1).

File Configuration Help							
File : E:\Sample documents\S	ection 4.1\eReferral.zip			6	MHR P2P	Run Conformance	Load and Validate XDS Metadata
Template: a Referral 2P. (1.2.26.1	2001 1006 1 21000 22 vor 2262/	n			U F2F	Show Report	
e-helenal 3b (1.2.36.1.	2001.1006.1.21000.22 Ver 32624	•)		×			
Addn Rules: Select additional rules te	emplate folder for validation					Run Addn Rules Only	
Information Rendered Document Sig	n File   Sign File Information   1	emplate Validation Report	Package Report	Reference Sets	Other Terminolog	py Aspects	
				Templ	ate Valio	lation Report	^
VALIDATION STATUS	Complete						
SERVICE NAME	e-Referral - 3B						
SERVICE PROVIDER	Australian Digital He	alth Agency					
STANDARD TYPE	CDA R2						
DATE OF TEST	09-Oct-2017						
TIME OF TEST	11:30:15 +10:00						
RESULT OF TEST	True						
ISSUE COUNT	0						
SIGNATURE VALIDATION	See Package Report	t Tab					
<							>
					Test O	bject	
<clinicaldocument th="" xmlr<=""><td>s:ext="http://ns.ele</td><th>ectronichealth.</th><th>net.au/Ci/C</th><td>da/Extensi</td><td>ons/3.0" xm</td><th>lns:xsi="http://www.</th><td>w3.org/2001/XMLSch</td></clinicaldocument>	s:ext="http://ns.ele	ectronichealth.	net.au/Ci/C	da/Extensi	ons/3.0" xm	lns:xsi="http://www.	w3.org/2001/XMLSch
<typeid exter<="" root="2.16.840&lt;/th&gt;&lt;td&gt;.1.113883.1.3" td=""><th>nsion="POCD_HD00</th><th>00040"/&gt;</th><td></td><td></td><th></th><td></td></typeid>	nsion="POCD_HD00	00040"/>					
<templateid exte<="" root="1.2.&lt;/th&gt;&lt;td&gt;36.1.2001.1001.101.&lt;/td&gt;&lt;th&gt;100.1002.2" th=""><th>ension="2.2</th><td>"/&gt;</td><td></td><th></th><td></td></templateid>	ension="2.2	"/>					
<pre><id root="76af7a71-f40&lt;/pre&gt;&lt;/th&gt;&lt;td&gt;a-4d0a-acba-9bf0da5&lt;/td&gt;&lt;th&gt;e394b"></id></pre>	.1.0.75						
<code c<="" code="57133-1" th=""><td>odeSystem="2.16.840</td><th>.1.113883.6.1"</th><th>codeSystemN</th><td>ame="LOINC</td><td>" displayNa</td><th>me="Referral Note"/&gt;</th><td></td></code>	odeSystem="2.16.840	.1.113883.6.1"	codeSystemN	ame="LOINC	" displayNa	me="Referral Note"/>	
<title>e-Referral<td>:le&gt;</td><th></th><th></th><td></td><td></td><th></th><td></td></title>	:le>						
<effectivetime value="&lt;/th&gt;&lt;td&gt;20120806161622+1000&lt;/td&gt;&lt;th&gt;"></effectivetime>							
<languagecode code="en&lt;/th&gt;&lt;td&gt;1-AU"></languagecode> <th></th> <th></th> <td></td> <td></td> <th></th> <td>×</td>						×	
<							>

Figure 65 - Template Validation Report tab showing template validation results

## 4.1.3 Display package validation results

To view the detailed package validation results, click the **Package Report** tab (Figure 66). The Validator reports some errors with the clinical package in this example, including the absence of a valid NASH certificate.

File	E:\Sample documents\Section 4.1\eReferral.zip	6	MHR	Run Conformance	Load and Validate XDS Metadata		
			O P2P	Show Report			
emplate:	e-Referral 3B (1.2.36.1.2001.1006.1.21000.22 ver 32624)						
dn Rules	Select additional rules template folder for validation			Run Addn Rules Only			
mation	Rendered Document   Sign File   Sign File Information   Template Validation Report   Package Report   R	eference Sets	Other Terminolog	y Aspects			
						Override Result	ts
PCD 07	4630 - Varify all narkaned attachments have filename extensions which matches their MI	ME type					
ass	TO TO THE AND A CONTRACT OF A CO	ne type				^	
						U 🗸	
PCD_02	3743 - Verify that CDA package is not larger than 10MB						
855						A	
						0	
						Ç 🗸	
PCD_02	3744 - Verify that a signed CDA package sent to the MHR system SHALL either contain an	eSignature	with a valid NA:	5H PKI certificate for health	care provider organisations, o	• •	
CD_02 ntain a	3744 - Verify that a signed CDA package sent to the HHR system SHALL either contain an n eSignature with a valid NASH PKI certificate for supporting organisations Package has NOT been signed with a NASH PKI certificate for a healthcare provider organis	eSignature	with a valid NA!	<b>SH PKI certificate for health</b> nisation (a CSP or GSO).	care provider organisations, o	or v	
PCD_02 ntain a ail: CD/	3744 - Verify that a signed CDA package sent to the MHR system SHALL either contain an n eSignature with a valid NASH PKI certificate for supporting organisations I Package has NOT been signed with a NASH PKI certificate for a healthcare provider organis	eSignature	with a valid NA!	<b>H PKI certificate for health</b> nisation (a CSP or GSO).	care provider organisations, o	or N	
PCD_02 ontain a ail: CD/	3744 - Verify that a signed CDA package sent to the NNR system SHALL either contain an n eSignature with a valid NASH PKI certificate for supporting organisations . Package has NOT been signed with a NASH PKI certificate for a healthcare provider organis	eSignature	with a valid NA! supporting orga	SH PKI certificate for health nisation (a CSP or GSO).	care provider organisations, o	sr X	
PCD_02 ntain a ail: CD/	3744 - Verify that a signed CDA package sent to the HHR system SHALL either contain an n eSignature with a valid NASH PKI certificate for supporting organisations Package has NOT been signed with a NASH PKI certificate for a healthcare provider organis	eSignature	with a valid NA supporting orga	SH PKI certificate for health nisation (a CSP or GSO).	care provider organisations, o	0 ×	
PCD_02 Intain a Bil: CD/	3744 - Verify that a signed CDA package sent to the MHR system SHALL either contain an n eSignature with a valid NASH PKI certificate for supporting organisations Package has NOT been signed with a NASH PKI certificate for a healthcare provider organis 732 - Verify a diagnostic report, including the attached PDF file, MAY reference an object	eSignature sation, or a outside of	with a valid NA: supporting orga	SH PKI certificate for health nisation (a CSP or GSO).	care provider organisations, o	· · · · · · · · · · · · · · · · · · ·	
PCD_02 ontain a ail: CD/ KG_024 ot Run	3744 - Verify that a signed CDA package sent to the MHR system SHALL either contain an n eSignature with a valid NASH PKI certificate for supporting organisations Package has NOT been signed with a NASH PKI certificate for a healthcare provider organis 732 - Verify a diagnostic report, including the attached PDF file, MAY reference an object	eSignature ation, or a outside of	with a valid NA: supporting orga the CDA packag	5H PKI certificate for health nisation (a CSP or GSO). e.	care provider organisations, o	· · · · · · · · · · · · · · · · · · ·	
PCD_02 ontain a sail: CD/ KG_024 Not Run	3744 - Verify that a signed CDA package sent to the MHR system SHALL either contain an n eSignature with a valid NASH PKI certificate for supporting organisations I Package has NOT been signed with a NASH PKI certificate for a healthcare provider organis 732 - Verify a diagnostic report, including the attached PDF file, MAY reference an object	eSignature iation, or a outside of	with a valid NA: supporting orga the CDA packag	5H PKI certificate for health nisation (a CSP or GSO).	care provider organisations, c	· · · · · · · · · · · · · · · · · · ·	1

Figure 66 - Package Report tab showing package validation results

## 4.1.4 Display code validation results

To view the detailed code validation results, click the **Reference Sets** tab (Figure 67) and the click the **Other Terminology Aspects** tab (Figure 68). If any warning is reported, the clinical document must be manually inspected to determine whether a 'Pass' or 'Fail' should be recorded for the relevant code. The override facility may be used to record the outcome of this inspection (Section 2.8).

## 3.8).

e Conf	iguration Help									
File :	E:\Sample docume	ents\Section 4	1.1\eReferral.zip			6	MHR	Run Conformance	Load and Validate XDS Metadata	
						_	O P2P	Show Report		
plate:	e-Referral 3B (1.2	2.36.1.2001.1	006.1.21000.22 ver 32	624)		~				
Rules:	Select additional r	ules template	folder for validation					Run Addn Rules Only		
tion	Rendered Document	Sign File	Sign File Information	Template Validation Report	Package Report	Reference Sets	Other Terminolog	y Aspects		
									c	verride Results
agino	g Examinatio	on Result	/Imaging Exa	mination Result (	Group > Anat	tomical Si	te > Specifi	c Location > Side		
	,		, , ,							
hatchii	ng elements four	nd nt/cda:com	opent/cda.structur	edBody/cdaycomnonent	/rda:section[rda:r	rode/@rode	= '101 20117']/	rda:component/rda:section[rr	davcode/@code =	
.1614	5']/cda:entry/cda	observatio	n[@classCode = 'O	BS']/cda:entryRelations	hip/cda:organizer[	[@classCode	= 'BATTERY']/co	a:component/cda:observation	n[@classCode =	_
J/cua	intargetSiteCode/	coarquaime	r/coa:value							
aging	g Examinatio	on Result	/Imaging Exa	mination Result :	> Anatomical	Site > S	pecific Locat	tion > Anatomical Loc	ation Name	
ie:/cda	a:ClinicalDocume	nt/cda:com	ponent/cda:structur	edBody/cda:component	/cda:section[cda:c	code/@code	= '101.20117']/	cda:component/cda:section[co	da:code/@code =	
.1614	5']/cda:entry/cda	observatio	n[@classCode = 'O	BS']/cda:targetSiteCode						
aging	g Examinatio	on Result	/Imaging Exa	mination Result :	> Anatomical	Site > S	pecific Locat	tion > Side		
natchi	na elements four	ad a								
e:/cda	a:ClinicalDocume	nt/cda:com	onent/cda:structur	edBody/cda:component	/cda:section[cda:c	code/@code	= '101.20117']/	cda:component/cda:section[co	da:code/@code =	
.1014	5 j/cdatentry/cda		n[@classCode = 0	b5 j/cdaitarget5iteCode	/coarquainer/coar	ivalue				
dicat	ion Instruct	10n > Me	dicine							
natchii	ng code found for	r '27555011	0000361' in code s	ystem '1.2.36.1.2001.1	004.100' for the re	eference set	s 'Medicinal Proc	duct (MP), Medicinal Product Pa	ack (MPP), Medicinal Product	
of Use	e (MPUU), Trade	Product (TP	), Trade Product Pa	ck (TPP), Trade Product	Unit of Use (TPU	U), Containe	red Trade Produ	ct Pack (CTPP)' ad Name:/cda:ClinicalDocume	nt[1]/cda:component	<b>•</b>
cda:st	ructuredBody[1]/	cda:compor	ent[2]/cda:section	[1]/cda:entry[1]/cda:su	bstanceAdministra	ation[1]/cda:	consumable[1]/	cda:manufacturedProduct[1]/	cda:manufacturedMaterial	
			41							
uicat	ion instruct	101 > Me	aicine							
3										
e Valu	e = 2822201100	0036107 Co	deSystem = 1.2.36	5.1.2001.1004.100 Displ	ay Name= tramad	dol hydrochlo	ride 50 mg caps	sule, 20 Calculated Name:/cda	:ClinicalDocument	<b>~</b>

Figure 67 - Reference Sets tab showing reference set validation results

File :	E:\Sample documents	Section 4.1 (Referral.zip			6	MHR	Run Conformance	Load and Validate XDS	
					-	O P2P	Show Report	Metadata	
mplate:	e-Referral 3B (1.2.36	1.2001.1006.1.21000.22 ver 32	2624)		~				
dn Rules:	Select additional rules	template folder for validation					Run Addn Rules Only		
mation	Rendered Document	Sign File Sign File Information	Template Validation Report	Package Report	Reference Sets	Other Terminolo	gy Aspects		
								(	Override Res
ss de Vali	ue = 308552006 Cod	eSystem = 2.16.840.1.113	883.6.96 Display Name=	report status C	alculated Nam	ne:/cda:ClinicalD	ocumentí 1]/cda:componentí	1/cda:structuredBody	
]/cda:c	omponent[5]/cda:se	tion[1]/cda:component[1]	/cda:section[1]/cda:entry	y[1]/cda:observa	ation[1]/cda:e	entryRelationshi	p[4]/cda:observation[1]/cda:o	ode[1]	•
NOME									
- OFFIC	DCT								
	DCT								_
ass ode Vali	D CT	System = 2.16.840.1.1138	83.6.96 Display Name= I	Pathology diagn	osis Calculate	ed Name:/cda:Cl	inicalDocument[1]/cda:compo	nent[1]/cda:structuredBody	~
ass ode Vali	D CT ue = 88101002 Code omponent[5]/cda:se	System = 2.16.840.1.1138 tition[1]/cda:component[1]	83.6.96 Display Name= 1 /cda:section[1]/cda:entry	Pathology diagn y[1]/cda:observa	osis Calculate ation[1]/cda:e	id Name:/cda:Cl entryRelationshi	inicalDocument[1]/cda:compc [5]/cda:observation[1]/cda:c	nent[1]/cda:structuredBody ode[1]	~
ass ode Vali 1]/cdato	D CT ue = 88101002 Code omponent[5]/cda:se D CT	System = 2.16.840.1.1138 tion[1]/cda:component[1]	83.6.96 Display Name= i /cda:section[1]/cda:entry	Pathology diagn y[1]/cda:observa	osis Calculate ation[1]/cda:e	ed Name:/cda:Cl entryRelationshi	inicalDocument[1]/cda:compo p[5]/cda:observation[1]/cda:c	nent[1]/cda:structuredBody ode[1]	~
ass ode Vali 1]/cdato NOME	ED CT ue = 88101002 Code component[5]/cda:se ED CT and but the display na ue = 286244002 Code	System = 2.16.840.1.1138 tion[1]/cda:component[1] me did not match. Expecte	83.6.96 Display Name= / /cda:section[1]/cda:entry d: 'Laboratory data inter 82.6 96 Display Names	Pathology diagni y[1]/cda:observi pretation'	osis Calculate ation[1]/cda:«	id Name:/cda:Cl entryRelationshi	inicalDocument[1]/cda:compc p[5]/cda:observation[1]/cda:o	nent[1]/cda:structuredBody ode[1]	~
ass ode Vali L]/cdato NOME ode fou ode fou ode Vali	ue = 88101002 Code omponent[5]/cda:se ED CT nd but the display na = 386344002 Cod tructuredBody[1]/cda	System = 2.16.840.1.1138 titon[1]/cda:component[1] me did not match. Expects eSystem = 2.16.840.1.113 component[3]/cda:section	83.6.96 Display Name= / /cda:section[1]/cda:entry d: 'Laboratory data inter 883.6.96 Display Nama= 813./cda:component[1]/cda:component[1]/cda	Pathology diagni y[1]/cda:observi pretation' Laboratory find da:section[1]/cd	osis Calculate ation[1]/cda:e ings data inte da:entry[1]/cd	id Name:/cda:Cl entryRelationshi erpretation Calcu la:observation[1	inicalDocument[1]/cda:compo p[5]/cda:observation[1]/cda: p[5]/cda:observation[1]/cda: j/cda:onty?kelationship[6]/cd	nent[1]/cda:structuredBody ode[1] ment[1]/cda:component a:observation[1]/cda:code[1]	✓
ass ode Valid 1]/cdato NOME code four code four code Valid 1]/cdats	ED CT = = 88101002 Code component[5]/cda:se ED CT = = 386344002 Code tructuredBody[1]/cda ED CT	System = 2.16.840.1.1138 tion[1]/cda:component[1] me did not match. Expecte eSystem = 2.16.840.1.113 component[3]/cda:settor	83.6.96 Display Name= [cda:section[1]/cda:entry d: 'Laboratory data inter 883.6.96 Display Name= [1]/cda:component[1]/c	Pathology diagni /[1]/cda:observi pretation' Laboratory find da:section[1]/cd	osis Calculate ation[1]/cda:e ings data inte da:entry[1]/cd	id Name:/cda:Cl entryRelationshi srpretation Calcu fa:observation[1	linicalDocument[1]/cda:compo [5]/cda:observation[1]/cda: []sted Name:/cda:ClinicalDocu ]/cda:entryRelationship(5)/cd	nant[1]/cda:structuredBody ode[1] ment[1]/cda:component a:observation[1]/cda:code[1]	<ul> <li>✓</li> </ul>
Code Vali 1)/cdato NOME Code four Code four Code Vali 1)/cdats	D CT = = 88101002 Code component(5)/cda:se D CT nd but the display na = 386344002 Cod tructuredBody(1)/cda D CT ing elements found	System = 2.16.840.1.1138 tion[1]/cda:component[1] me did not match. Expecte #System = 2.16.840.1.13 component[3]/cda:section	83.6.96 Display Name= (cda:section[]/cda:entry d: 'Laboratory data inter 883.6.96 Display Nama= []/cda:component[1]/c	Pathology diagn (1)/cda:observa pretation' Laboratory find da:section[1]/cd	osis Calculate ation[1]/cda:« ings data inte fa:entry[1]/cd	id Name:/cda:Cl entryRelationshi srpretation Calcu fa:observation[1	linicalDocument[1]/cda:compo p[5]/cda:observation[1]/cda: p[5]/cda:observation[1]/cda: j]/cda:entryRelationship[6]/cd	nent[1]/cda:structuredBody ode[1] ment[1]/cda:component a:observation[1]/cda:code[1]	~
ass iode Valu ]/cdato NOME ode four ode Valu 1]/cdats NOME o match ame://e	B CT == 88101002 Code component[5]/cda:se ED CT == 386344002 Code == 386344002 Code == 386344002 Code == 2000 CT == 20	System = 2.16.040.1.1138 tton[1]/cda:component[1] me did not match. Expecte eSystem = 2.16.040.1.13 tcomponent[3]/cda:section 2.16.040.1.1138083.6.96 <sup>(1)</sup>	83.6.96 Display Name= (daisection[1]/cdaientry di 'Laboratory data inter 883.6.96 Display Name= [1]/cdaicomponent[1]/c	Pathology diagn (1]/cdarobserva pretation' Laboratory find darsection[1]/cd	osis Calculate ation[1]/cda:« ings data inte da:entry[1]/cd	id Name:/cda:Cl entryRelationshi srpretation Calcu fa:observation[1	linicalDocument[1]/cda:compo p[3]/cda:observation[1]/cda: p[3]/cda:observation[1]/cda: p[3]/cda:entryRelationship[6]/cd	nent[1]/cdaistructuredBody ode[1] ment[1]/cdaiscomponent aiobservation[1]/cdaiscode[1]	<ul> <li>✓</li> <li>►</li> <li>■</li> </ul>
ass ode Valu ]/cdato NOME ode fou ode fou ode Valu ]/cdats NOME o match ame://e	ID CT IIII = 88101002 Code component[5]/cdarse ID CT IIIII = 0000000000000000000000000000000	System = 2.16.840.1.1138 tion[1]/cda:component[1] me did not match. Expecte eSystem = 2.16.840.1.13 component[3]/cda:section 2.16.840.1.113883.6.96 <sup>1</sup> ] erminology (AMT)	83.6.96 Display Name= Cdaisection[1]/cdaientry di 'Laboratory data inter 883.6.96 Display Name= [1]/cdaicomponent[1]/c	Pathology diagno y[1]/cda:observa pretation' Laboratory find da:section[1]/cd	osis Calculate ation[1]/cda:e ings data inte fa:entry[1]/cd	id Name:/cda:Cl antryRelationshi spretation Calcu la:observation[1	linicalDocument[1]/cda:compo p[3]/cda:observation[1]/cda: p[3]/cda:observation[1]/cda: p[]/cda:entryRelationship[6]/cd	nant[1]/cda:structuredBody ode[1] ment[1]/cda:component a:observation[1]/cda:code[1]	<ul><li>✓</li><li></li></ul>
ass ode Valu ]/cdato NOME ode four ode	ID CT IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	System = 2.16.040.1.1138 tton[1]/cda:component[1] me did not match. Expecte eSystem = 2.16.040.1.113 ccomponent[3]/cda:section 2.16.040.1.113803.6.96 <sup>(1)</sup> erminology (AMT) 75550110000361 <sup>1</sup> in code	83.6.96 Display Name= I (cda:section[1]/cda:entry d: 'Laboratory data inter 883.6.96 Display Name= [1]/cda:component[1]/c	Pathology diagne y[1]/cda:observa pretation' Laboratory find da:section[1]/cd	osis Calculate ation[1]/cdare	id Name:/cda:Cl entryRelationshi spretation Calcu la:observation[1	linicalDocument[1]/cda:compo p[3]/cda:observation[1]/cda: lated Name:/cda:ClinicalDocu ]/cda:entryRelationship[6]/cd	nent[1]/cda:structuredBody ode[1] ment[1]/cda:component a:observation[1]/cda:code[1]	<ul> <li></li> <li></li></ul>
ass ode Vali 1]/cdasc NOME ode fou ode Vali 1]/cdass NOME ustral	ED CT Le = 88101002 Code component[5]/cdarse ED CT Ind but the display na Le = 386344002 Cod trutture88044(1)/cda ED CT Ing elements found txt:*[@codeSystem= Ian Medicines ] Ing code found for: = = 27550110000 trutture8804(1)/cda ode[]	System = 2.16.840.1.1138 tion[1]/cda:component[1] me did not match. Expecte eSystem = 2.16.840.1.13 ccomponent[3]/cda:section 2.16.840.1.113883.6.96 <sup>11</sup> erminology (AMT) 755501.10000381 <sup>11</sup> in code 61 CodeSystem = 1.3.26.1	83.6.96 Display Name= (daisection[1]/cdaientry di 'Laboratory data inter 883.6.96 Display Name= [1]/cdaicomponent[1]/c yystem '1.2.36.1.2001.1 .2001.1004.100 Display [1]/cdaiseut/1]/cdaiseut	Pathology diagn (1)/cds:observi retation' Laboratory find da:section[1]/cd 004.100' Name= naproxe	osis Calculate ation[1]/cdare ings data inte arentry[1]/cd an 250 mg tal	id Name:/cda:Cl antryRelationshi arpretation Calcu a:observation[] blat, 50 Calculat :consumable[1]	linicalDocument[1]/cda:compo [3]/cda:observation[1]/cda: lated Name:/cda:ClinicalDocu ]/cda:entryRelationship[6]/cd nd Name:/cda:ClinicalDocume /cda:manufacturedProduct[1]/	nent[1]/cda:structuredBody ode[1] ment[1]/cda:component a:observation[1]/cda:code[1] nt[1]/cda:component cda:manufacturedMaterial	✓ ► ■

Figure 68 - Other Terminology Aspects tab showing code validation results

## 4.1.5 Generate a test report

To generate a test report in Adobe PDF format, click the **Show Report** button (Figure 69). Enter details of information to be included in the report and then click the **Continue** button (Figure 70).

File Cont	figuration Help											
File :	E:\Sample docume	ents\Section 4.	1\eReferral.zip			6	MHR O P2P	Run Conforman	ce	Load and Validate XDS Metadata		
Template:	e-Referral 3B (1.2	2.36.1.2001.10	06.1.21000.22 ver 32	624)	~				-			
Addn Rules:	Select additional r	ules template f	older for validation			<b></b>		Run Addn Rules (	Dnly			
Information	Rendered Document	Sign File	Sign File Information	Template Validation Report	Package Report Re	eference Sets	Other Terminolog	gy Aspects				
										c	verride Results	
Pass Code Valu	e = 308552006 (	CodeSystem	= 2.16.840.1.1138	883.6.96 Display Name=	report status Calci	lated Nam	e:/cda:ClinicalD	ocument[1]/cda:co	mponent[1]/	cda:structuredBody	$\checkmark$	~
[1]/cda:co	omponent[5]/cda	:section[1]/c	da:component[1]/	cda:section[1]/cda:entr	/[1]/cda:observatio	on[1]/cda:e	entryRelationship	p[4]/cda:observatio	on[1]/cda:cod	e[1]	•	
SNOME	DCI											
Pass Code Valu	ue = 88101002 Co	odeSystem =	2.16.840.1.1138	83.6.96 Display Name= I	Pathology diagnosi:	s Calculate	d Name:/cda:Cl	inicalDocument[1]/	cda:compone	nt[1]/cda:structuredBody		
[1]/cda:co	omponent[5]/cda	section[1]/c	da:component[1]/	cda:section[1]/cda:entr	y[1]/cda:observatio	on[1]/cda:e	ntryRelationship	p[5]/cda:observatio	on[1]/cda:cod	e[1]	•	
SNOME	D CT											
Code four Code Valu [1]/cda:st	nd but the display ue = 386344002 ( tructuredBody[1]/-	v name did n CodeSystem cda:compone	ot match. Expected = 2.16.840.1.1138 ent[5]/cda:section	d: 'Laboratory data inter 883.6.96 Display Name= [1]/cda:component[1]/c	pretation' Laboratory finding: da:section[1]/cda:	s data inte entry[1]/cd	rpretation Calcu a:observation[1	lated Name:/cda:C ]/cda:entryRelation	linicalDocume	nt[1]/cda:component observation[1]/cda:code[1]	<b>P</b>	
SNOME	р ст											ų.
No matchi Name://e	ing elements four xt:*[@codeSyster	nd m='2.16.840	.1.113883.6.96']									
Austral	ian Medicine	s Termino	ology (AMT)									1
No matchi Code Valu [1]/cda:st [1]/cda:co	ing code found fo ue = 2755501100 tructuredBody[1]/ ode[1]	r '275550110 00361 Codes cda:compone	0000361' in code s System = 1.2.36.1 ent[2]/cda:section	ystem '1.2.36.1.2001.1 .2001.1004.100 Display [1]/cda:entry[1]/cda:sul	004.100' Name= naproxen 2 bstanceAdministrati	250 mg tab ion[1]/cda:	olet, 50 Calculat consumable[1]/	ed Name:/cda:Clin /cda:manufactured	icalDocument  Product[1]/cdi	[1]/cda:component a:manufacturedMaterial	<b> </b>	
Austral	ian Medicine	s Termino	ology (AMT)									~

Figure 69 - Generating a test report

[] Conformance Report Information	
Report Details	
Author Name:	John Goodson
Software Development Organisation:	Good software coporation
Report Identifier:	2015-06-15-01
Developer Name:	
Name of implementation under test:	Good clinical information system
Version of implementation under test:	4.0
Test environment:	Windows 7
Location of assessment (address):	400 George Street, Brisbane, QLD, 4000
Tester name:	John Goodson
Tester organisation:	Good software coporation
Other information:	
	Continue Cancel

Figure 70 - Adding test report information

The test report is now complete (Figure 71).

# **Clinical Document Conformance Report**

(for producers of clinical documents) Prepared by John Goodson for Good software coporation Report identifier: 2015-06-15-01 Test date: Monday, 15 June 2015 Figure 71 - Completed test report

## 4.2 Examples of code validation

The Validator examines codes and their associated display names in some clinical documents and compares these against codes and display names in supported code systems. It then reports whether a code in a clinical document and its associated display name are valid i.e. the Validator will report a 'Pass', 'Fail' or 'Warning' for that code and display name.

A 'Warning' is reported if the Validator is unable to find a matching code and display name in a supported code system. As a warning may be reported due to an underlying error in the clinical document, warnings are investigated to determine why a code or display name in the clinical document could not be found in the supported code system. This helps the tester to determine whether to override the 'Warning' and record a 'Pass' or 'Fail' for that code and display name.

This section contains examples of code validation performed on some clinical documents created by actual health software systems, including examples where the result of code validation was overridden.

Please refer to the Clinical Package Validator Product Data Sheet for further details on the scope of tests for clinical terminology validation.

## 4.2.1 Australian Vaccine code error

Figure 72 shows a 'Warning' reported in the **Other Terminology Aspects** tab because the value of the displayName attribute for an Australian Vaccine code in a clinical document was not the expected name.

An examination of the list of Australian Vaccine codes (in the Australian Vaccine codes <u>website</u><sup>6</sup>) showed that the expected displayName for the vaccine code 'ADT' is 'ADT' (the vaccine brand name). The override facility was used to report a 'Fail' because the displayName in the clinical document was 'BOOSTRIX'.

The display name is the name associated with a code, and both the code and display name should be imported into a clinical document from a code system. The originalText element is used to record text that is typed in or selected by a healthcare provider. In this example, the originalText element was not present in the clinical document. Instead of storing this text in the originalText element, the healthcare software system may have mistakenly recorded the text in the displayName attribute instead.

#### Australian Vaccine Code

Code found but the display name did not match. Expected: 'ADT' Code Value = ADT CodeSystem = 1.2.36.1.2001.1005.17 Display Name= BOOSTRIX Calculated Name:/cda:ClinicalDocument[1]/cda:component[3]/cda:structuredBody [1]/cda:component[5]/cda:section[1]/cda:ntry[1]/cda:structuredAministration[1]/cda:consumable[1]/cda:manufacturedProduct[1]/cda:manufacturedMaterial[1]/cda:code[1]

Figure 72 - Other Terminology Aspects tab showing a warning for an Australian Vaccine code

#### 4.2.2 ANZSCO code error

Figure 73 shows a 'Warning' reported in the **Other Terminology Aspects** tab because an Australian and New Zealand Standard Classification of Occupations (ANZSCO) code in the clinical document was not a valid code.

An examination of the set of ANZSCO codes showed that '2515' was not a valid code as it did not have the required six characters. '2515' indicates a group of classifications so trailing zeroes should have been added to this code i.e. '251500'. The letters 'nfd' (not further defined) should

<sup>&</sup>lt;sup>6</sup> <u>http://www.humanservices.gov.au/health-professionals/services/australian-childhood-immunisation-register/acir-vaccine-code-formats</u>

also have been added to the display name of the code i.e. 'Pharmacists nfd' [ABS1220.0]. The override facility was used to report a 'Fail'.

#### ANZSCO Type Code

```
No matching code found for '2515' in code system '2.16.840.1.113883.13.62'
Code Value = 2515 CodeSystem = 2.16.840.1.113883.13.62 Display Name= Pharmacists Calculated Name:/cda:ClinicalDocument[1]/cda:author[1]/cda:assignedAuthor
[1]/cda:code[1]
```

Figure 73 - Other Terminology Aspects tab showing a warning for an ANZSCO code

#### 4.2.3 Australian PBS item code error

Figure 74 shows a 'Warning' reported in the **Other Terminology Aspects** tab because a PBS item code was not valid.

When a PBS item code is used to identify a therapeutic good in an eHealth prescription record or eHealth dispense record, the code must be at least six characters in length [NEHTA2015d]. The override facility was used to report a 'Fail' because the PBS item code only had five characters i.e. '1081X'. If the PBS item code had been prepended with one or more zeroes (e.g. '01081X'), the Validator would not have a reported a 'Warning'.

#### Australian PBS Code

No matching code found for '1081X' in code system '1.2.36.1.2001.1005.22' Code Value = 1081X CodeSystem = 1.2.36.1.2001.1005.22 Calculated Name:/cda:ClinicalDocument[1]/cda:component[1]/cda:structuredBody[1]/cda:component[1]/cda:section [1]/cda:entry[1]/cda:substanceAdministration[1]/cda:consumable[1]/cda:manufacturedProduct[1]/cda:manufacturedMaterial[1]/cda:code[1]

Figure 74 - Other Terminology Aspects tab showing a warning for an Australian PBS item code

#### 4.2.4 Health Care Facility Type code error

Figure 75 shows a 'Warning' reported in the **Other Terminology Report** tab because the ANZSCO code that was used to describe the role of the document author i.e. '253111' did not have the matching ANZSCO code system identifier. Instead, the Validator found the ANZSIC code system identifier i.e. '1.2.36.1.2001.1005.47 and ANZSIC is used to describe the role of an organisation or facility, not the role or occupation of a person. The override facility was used to change the 'Warning' into a 'Fail' because the ANZSCO code system identifier should have been used.

#### Health Care Facility Type Code

No matching code found for '253111' in code system '1.2.36.1.2001.1005.47' Code Value = 253111 CodeSystem = 1.2.36.1.2001.1005.47 Display Name= General Medical Practitioner Calculated Name:/cda:ClinicalDocument[1]/cda:author [1]/cda:assignedAuthor[1]/cda:cde[1]

Figure 75 - Other Terminology Aspects tab showing a warning for a healthcare facility type code

## 4.2.5 Valid Australian Vaccine code

Figure 76 shows a 'Warning' and Figure 77 shows a 'Pass' for an Australian Vaccine code in an event summary. The 'Warning' was displayed in the **Reference Sets** tab and the 'Pass' was displayed in the **Other Terminology Aspects** tab.

The Validator examines the locations in a clinical document where an AMT, SNOMED CT-AU or PBS item code is expected, and reports a 'Warning' in the **Reference Sets** tab if one of the locations contains a code from an unexpected code system. In this example, the Validator expected a code from the AMT code system but instead found a code from the 'Australian vaccines codes' code system.

In the **Other Terminology Aspects** tab, however, the Validator reported a 'Pass' because the Validator found a code and display name from a code system supported by the Validator i.e. the 'Australian vaccines codes' code system.

The override facility was used to change the 'Warning' in the **Reference Sets** tab into a 'Pass' because the Validator found a valid code from a supported code system and an AMT code is not mandatory when a clinical document is being tested for level 3A conformance.

#### Immunisation > Therapeutic Good Identification

No matching code system found; Found: Australian Vaccine Code[1.2.36.1.2001.1005.17] Expected: 1.2.36.1.2001.1004.100 or 2.16.840.1.113883.6.96 Code Value = PRPT CodeSystem = 1.2.36.1.2001.1005.17 Display Name= ACTHIB Calculated Name:/cda:ClinicalDocument[1]/cda:component[5]/cda:settion[1]/

Figure 76 - Reference Sets tab showing a warning for an Australian Vaccine code

#### Australian Vaccine Code

Pass Code Value = PRPT CodeSystem = 1.2.36.1.2001.1005.17 Display Name= ACTHIB Calculated Name:/cda:ClinicalDocument[1]/cda:component[1]/cda:structuredBody [1]/cda:component[5]/cda:section[1]/cda:antry[1]/cda:substanceAdministration[1]/cda:consumable[1]/cda:manufacturedProduct[1]/cda:manufacturedMaterial[1]/cda:code[1]

Figure 77 - Other Terminology Aspects tab showing a pass for an Australian Vaccine code

#### 4.2.6 SNOMED CT-AU display name error

Figure 78 shows a 'Fail' reported in the **Reference Sets** tab for the display name of a SNOMED CT-AU code. The Validator reported that the display name 'Myocardial infarction' was expected but 'Myocardial Infarction' was found.

An examination of the SNOMED CT-AU database shows that the value of the case significance indicator for SNOMED CT-AU code '22298006' is '900000000000000020002', meaning that only the first character of the first word is case insensitive and all other characters are case sensitive i.e. the allowed spellings are either 'myocardial infarction' or 'Myocardial infarction'. The Validator correctly reported a 'Fail' for the display name in the clinical document.

Problem/Diagnosis > Problem/Diagnosis Identification

Code found but the display name did not match. Expected: 'Myocardial infarction' Code Value = 22298006 CodeSystem = 2.16.840.1.113883.6.96 Display Name= Myocardial Infarction Calculated Name:/cda:ClinicalDocument[1]/cda:component [1]/cda:structuredBody[1]/cda:component[3]/cda:section[1]/cda:entry[2]/cda:observation[1]/cda:value[1]



#### 4.2.7 Valid omission of a code

Figure 79 shows a 'Warning' reported by the Validator in the **Reference Sets** tab. No code was found in any of the locations where the Validator searches for codes. In this example, the clinical document was an event summary, which was being tested for level 3A conformance, so inclusion of the code was optional. The 'Warning' was overridden with a 'Pass'.

#### Adverse Reaction > Substance/Agent

No matching code system found; Found: none Code Value = CodeSystem = Calculated Name:/cda:ClinicalDocument[1]/cda:component[1]/cda:structuredBody[1]/cda:component[2]/cda:section[1]/cda:entry[1]/cda:act [1]/cda:participant[1]/cda:participantRole[1]/cda:playingEntity[1]/cda:code[1]



## 4.2.8 SNOMED CT-AU code error

Figure 80 shows a warning reported by the Validator in the **Other Terminology Aspects** tab for the code '152305019'. An examination of the SNOMED CT-AU code set showed that '152305019' is a description identifier, rather than a concept identifier. The 'Warning' was overridden with a 'Fail' because a concept identifier should have been used.

#### SNOMED CT

No matching code found for '152305019' in code system '2.16.840.1.113883.6.96' Code Value = 152305019 CodeSystem = 2.16.840.1.113883.6.96 Display Name= Allergy to nuts Calculated Name:/cda:ClinicalDocument[1]/cda:component [1]/cda:ructuredBody[1]/cda:component[1]/cda:section[1]/cda:component[1]/cda:section[1]/cda:entry[1]/cda:observation[1]/cda:participantRole [1]/cda:playingEntity[1]/cda:code[1]

Figure 80 - Other Terminology Aspects tab showing a warning for a SNOMED CT-AU code

## 5 Batch validation

As an alternative to using the graphical user interface of the Validator, the command line interface can be used to perform template, package, and code validation (for which the Validator may be used), and to produce test reports in XML format. The command line interface is used to validate batches of clinical documents and clinical packages. To confirm when the Validator can be used please refer to the *Clinical Package Validator Product Data Sheet* and confirm the intended use with the Agency Help Desk on 1300 901 001.

The Validator's command line interface is intended for use by software developers and testers using scripts or a batch file. For example, a software developer can create a script to command the Validator to validate a file, or to analyse test reports to determine whether any errors were found or if an expected error was reported. The script is invoked through the Validator command line interface.

## 5.1 Using the command line interface

To validate a file using the Validator command line interface.

1 Open the Windows Command Prompt by selecting Start -> All programs -> Accessories, and then clicking Command Prompt.



Note: The username that is displayed will vary from user to user.

2

Navigate to the root directory by typing the command  $cd\$  and then press Enter.



# 3 Navigate to the Validator directory (i.e. CPV27) by typing the command cd DigitalHealth\CPV27 and then press Enter.



4

Launch the Validator through the command line interface by typing the command: CPvalidator.exe FileDirectory FileToValidate TemplateDirectory Target IncludePDFReport AdditionalRulesTemplateFolder

#### where:

- a FileDirectory is the absolute path to the directory that contains file to be validated;
- **b** FileToValidate is the file/pattern of files to be validated;
- c TemplateDirectory is the OID of the template package which must have been downloaded already through the GUI;
- d Target is the context for package validation, i.e. My Health Record or P2P;
- e IncludePDFReport is either True or False depending on if you require the PDF summary report (which is saved and located in the same directory as where the target file has been selected from); and
- $f \quad {\tt AdditionalRulesTemplateFolder} \ is the absolute path to the root directory that contains the template package with additional validation rules. }$

If no additional rules are to be applied during package validation, the

AdditionalRulesTemplatePath can be excluded from the above command, as below.



If, however, additional rules are also to be applied during package validation, the AdditionalRulesTemplatePath should be included in the above command, as below.



Then press Enter.

5 When using the command line interface, there are a number useful tips.

- a Make sure to execute the command from the C:\DigitalHealth\CPV27 directory as the executable needs a number of files in order to run.
- b Put quotation marks around each parameter, as for example some directory names have spaces in their names.
- c For directory paths, use a double backslash as the application interprets single backslashes as escape characters
- d For processing multiple files at the same time, you can only process files of the same document type, given that you have to specify the template type.

Below are some examples of how to use the command line interface.

#### Drop into a command prompt and type:

CD C:\DigitalHealth\CPV27

#### Example 1: single file with no PDF report

```
cpvalidator "c:\\temp\\" "cda.xml" "1.2.36.1.2001.1006.1.170.5" "MHR" "false"
```

#### Example 2: multiple files with a PDF report

```
cpvalidator "c:\\temp\\" "pres*.xml" "1.2.36.1.2001.1006.1.170.5" "MHR" "true"
```

#### Example 3: single file using an additional rules template

```
cpvalidator "c:\\temp\\" "cda.xml" "1.2.36.1.2001.1006.1.170.5" "MHR"
"false" "c:\\temp\\AdnRulesTemplate"
```

#### Example 4: single zip file testing for Point to Point (P2P) rules and a report

```
cpvalidator "c:\\temp\\" "cda.zip" "1.2.36.1.2001.1006.1.170.5" "P2P" "true"
```

#### Example 5: single file using an additional rules template and no template package

```
cpvalidator "c:\\temp\\" "cda.xml" "" "MHR" "false"
    "c:\\temp\\AdnRulesTemplate"
```

End

## 5.2 Analysing validation results

Validation results are stored in XML files in the "C:\DigitalHealth\CPV27\Temp" directory (Figure 81). If a script is written to validate a batch of clinical packages or clinical documents, it could contain instructions to copy these files to another directory after each validation because these files will be removed when another validation is performed. This is not mandatory as if you request the report PDF, it should contain all the details you need about each file, in addition to the report.csv and analysis.csv file.

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E Recent places	EventSummaryTestSet01_1A.zip_Error_output_Term	15/04/2016 9:55 AM	ZIP_ERROR_OUTP
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Figure 81 - Storage of validation results including additional template validation results

The XML files created by the Validator to store validation results are listed in Table 14, where <FileName> is the name of the file (i.e. clinical package or clinical document) that was validated.

File name	Description
<filename>.xml_Error_output.xml</filename>	An XML report of template validation errors.
<filename>.xml_PkgValResult.xml</filename>	An XML report of package validation errors. This report is only produced if the file that was validated was either a clinical package or an HL7 MDM wrapped clinical package.
<filename>_Error_output_Term.xml</filename>	An XML report of reference set validation errors.
<filename>_Other_Terminology_Validations.xml</filename>	An XML report of Other Terminology Aspects validation errors.
<filename>_Additional_output.xml</filename>	An XML report of additional template validation errors.
	<b>Note:</b> This xml file only appears if the AdditionalRulesTemplatePath is used.

	Table 14 - Files cre	ated by the	Validator to	store valida	ition results
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The file "report.csv" (Section 3.10) contains a cumulative summary of test results, file "analysis.csv" (Section 3.10) contains a list of the issues, and the XML files listed in Table 14 contain detailed test results. The cumulative summary of test results may be used to complement analysis of the detailed test results.

A user of the Validator may write a script to interrogate the test report XML files. Unlike the graphical user interface where an image is displayed for a test result (Figure 82), the test results in the XML files are stored as references to an image (Figure 83) i.e. the graphical user interface reports a 'Fail' as K whereas the test result XML files report a 'Fail' as <IMG src="No.png" />.



Figure 82 - Graphical user interface with image reporting a 'Fail' for clinical packaging test case CPCD\_023744

<testdataite<u>m&gt;</testdataite<u>
<reference>CPCD 023744</reference>
<message>Fall: CDA Package has NOT been signed with a</message>
NASH PKI certificate for a healthcare provider organisation,
or a supporting organisation (a CSP or GSO).
<description>Verify that a signed CDA package sent to</description>
the PCEHR system SHALL either contain an eSignature with a
valid NASH PKI certificate for healthcare provider
organisations, or contain an eSignature with a valid NASH PKI
certificate for supporting organisations
<result></result>
<text>Fail: CDA Package has NOT been signed with a</text>
NASH PKI certificate for a healthcare provider organisation,
or a supporting organisation (a CSP or GSO).
cime and
<img src="No.png"/>

Figure 83 - XML file with image reference reporting a 'Fail' for clinical packaging test case CPCD\_023744

Scripts that interrogate the test result XML files should search for XML tags with references to an image. They should not search the error message for 'Pass', 'Fail' or 'Warning' text (Figure 94).

Table 15 describes the image reference associated with each test result.

Test result	Image reference	
Pass	<img src="Accept.png"/>	
Fail	<img src="No.png"/>	
Warning	<img src="Warning.png"/>	
Not Run	<img src="NA.png"/>	

Table 15 - Test results and image references

# Acronyms

Acronym	Description
AMT	Australian Medicines Terminology
ANZSCO	Australian and New Zealand Standard Classification of Occupations
ANZSIC	Australian and New Zealand Standard Industrial Classification
CDA	Clinical Document Architecture
DVA	Department of Veterans' Affairs
HL7	Health Level Seven
HPI-I	Healthcare Provider Identifier - Individual
HPI-O	Healthcare Provider Identifier - Organisation
HTML	HyperText Markup Language
IHI	individual healthcare identifier
IHTSDO	International Health Terminology Standards Development Organisation
JPEG	Joint Photographic Experts Group (image format)
MDM	Medical Document Management
МТОМ	Message Transmission Optimization Mechanism
NASH	National Authentication Service for Health
OID	object identifier
P2P	provider to provider
PBS	Pharmaceutical Benefits Scheme
РКІ	Public Key Infrastructure
SNOMED CT-AU	Systematized Nomenclature of Medicine Clinical Terms - Australia
SOAP	Simple Object Access Protocol
URI	Uniform Resource Identifier
XML	Extensible Markup Language
ZIP	archive file format

# Glossary

Term	Meaning
body	The body of a clinical document contains the clinical information.
header	The header of a clinical document contains information about the patient, healthcare provider and administrative details.
narrative block	A narrative block is an XML fragment enclosed within <text> elements. A narrative block contains unstructured narrative text that is to be rendered into human-readable form. The narrative block may contain XML tags that rendering systems use to format the narrative.</text>
SNOMED CT	Systematized Nomenclature of Medicine - Clinical Terms is the internationally pre- eminent clinical terminology that has been identified as the preferred national terminology for Australia and has been endorsed by all Australian governments.
SNOMED CT-AU	SNOMED CT Australian Release (SNOMED CT-AU) is the Australian extension to SNOMED CT, providing local variations and customisations of terms relevant to the Australian healthcare community. It includes the international resources along with all Australian developed terminology.
structured data	Structured data is an XML fragment intended for computer processing. Structured data is not rendered for human readers. Some structured data is referred to as 'coded data' as it is associated with a code system.
## References

[HL72004]	HL7 Clinical Document Architecture, Release 2.0; Health Level Seven International, 2004; http://www.hl7.org/
[IHTSDO2014]	SNOMED CT Technical Implementation Guide; International Health Terminology Standards Development Organization, 2014; http://www.snomed.org/
[NEHTA2011a]	CDA Package, version 1.0; NEHTA, 2011; https://www.digitalhealth.gov.au/implementation- resources/clinical-documents/EP-2320-2016/NEHTA-1229-2011
[NEHTA2012a]	CDA Rendering Specification, version 1.0; NEHTA, 2012; https://www.digitalhealth.gov.au/implementation-resources/clinical-documents/EP-2320- 2016/NEHTA-1199-2012
[NEHTA2012b]	P2P Document Delivery Technical Service Specification, version 1.1; NEHTA, 2012; https://www.digitalhealth.gov.au/implementation-resources/clinical-documents/EP-1254- 2012/NEHTA-1227-2012
[NEHTA2014a]	Australian CDA Schema Extension, version 3.0; NEHTA, 2014; https://www.digitalhealth.gov.au/implementation-resources/ehealth-reference-platform/EP-2344- 2016/NEHTA-2150-2014
[NEHTA2014b]	PCEHR Document Exchange Service Logical Service Specification, version 1.3.1; NEHTA, 2014; https://www.digitalhealth.gov.au/implementation-resources/national-infrastructure/EP-2109- 2015/NEHTA-1970-2014
[NEHTA2014c]	PCEHR Document Exchange Service Technical Service Specification, version 1.5.1; NEHTA, 2014; https://www.digitalhealth.gov.au/implementation-resources/national-infrastructure/EP-2109-2015/NEHTA-1971-2014
[NEHTA2015b]	Conformance Test Specification for CDA Packaging, version 1.5; NEHTA, 2015; https://www.digitalhealth.gov.au/implementation-resources/clinical-documents/EP-2320- 2016/NEHTA-2065-2015
[NEHTA2015c]	Clinical Documents - Common Conformance Profile, version 1.6; NEHTA, 2015; https://www.digitalhealth.gov.au/implementation-resources/clinical-documents/EP-2320- 2016/NEHTA-1850-2015
[NEHTA2015d]	eHealth Prescription Record - PCEHR Conformance Profile, version 1.3; NEHTA, 2015; https://www.digitalhealth.gov.au/implementation-resources/clinical-documents/EP-1919- 2015/NEHTA-1912-2015