



**eHealth Pathology Report View
Presentation Guide v1.1**

31 July 2015

Approved for external use

Document ID: NEHTA-2055:2015

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Acknowledgement

The National E-Health Transition Authority is jointly funded by the Australian Government and all State and Territory Governments.

Document information

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Product version history

Product version	Date	Release comments
1.0	31 December 2014	Initial release
1.1	31 July 2015	Changes related to column headings, displaying text blocks where space is limited, as well as clarification on viewing PDF documents.

Table of contents

1	Introduction	5
1.1	Purpose.....	5
1.2	Intended audience	5
1.3	Scope.....	5
1.4	Overview	6
1.5	Points to note.....	6
1.5.1	Supporting documents.....	6
1.5.2	Structure of the presentation guide	7
1.5.3	Illustrations.....	7
1.5.4	Conformance process	7
1.5.5	Accessibility assurance	7
1.6	Assumptions	8
2	Presentation Guide	9
2.1	View content	9
2.1.1	One or more rows available.....	10
2.1.2	No information is available	12
2.2	Date filter	12
2.3	Group by	13
2.4	Ordering.....	14
2.5	Collapsed and expanded items view	15
3	Data usage	17
	Acronyms	18
	Glossary	19
	References	20

1 Introduction

1.1 Purpose

This document is a presentation guide for the Personally Controlled Electronic Health Record (PCEHR) Pathology Report View, frequently referred to as the 'View' within this document.

This guide provides the details for presenting the Pathology Report View in vendor clinical information systems (CIS). The design is based on previous presentation guides to ensure a consistent display, functionality and to reduce clinical risk.

In the past, PCEHR views have been returned as a clinical document and a supporting Clinical Document Architecture (CDA^{®1}) implementation guide has been provided to assist implementers. Given that the Pathology Report View will be returned as custom XML rather than as a clinical document, this document has been expanded to provide information and guidance on the use of the Pathology Report View custom XML.

1.2 Intended audience

This document is intended for all interested stakeholders including:

- clinical peak bodies, representative groups and subject experts in the area of pathology;
- hospitals and health departments planning, implementing or upgrading eHealth systems;
- software vendors, software developers and designers developing eHealth system products;
- jurisdictions, health service providers and health software representative groups;
- senior managers and policy makers, clinical experts, health information managers and system integrators;
- stakeholders associated with the development and use of upcoming eHealth initiatives relating to Pathology;
- the Commonwealth Department of Health; and
- consumers and consumer representatives.

1.3 Scope

This document is limited to outlining conformance points for a CIS displaying the Pathology Report View that is sent from the PCEHR to the CIS.

The conformance points apply regardless of technology or means of implementation.

This document does *not* cover:

- other views and requirements for the PCEHR;
- technical specification for rendering the Pathology Report View;
- interoperability between the systems generating the Pathology Report View and those rendering it; or

¹ CDA is a registered trademark of Health Level Seven International.

- non-traditional interfaces involving touch screens and mobile devices.

1.4 Overview

The Pathology Report View is intended to be an electronic summary of the Pathology report information contained in a consumer's PCEHR.

For healthcare providers and pathology service providers, the View gives a collated summary of the consumer's pathology reports.

For consumers accessing the national consumer portal, the View gives an overview of pathology reports that are available in the PCEHR.

This presentation guide will:

- provide guidance on how the information should be formatted for display; and
- outline the method for constructing the Pathology Report Views in clinical information systems.

The PCEHR will generate the Pathology Report View and also present Pathology Report Views in the national provider and consumer portals. This guide will support other clinical information system vendors, developers and implementers who want to interact with the PCEHR by retrieving and displaying the Pathology Report View within their propriety software solutions.

As a guide, it includes multiple illustrations of the design and detailed rationale (where applicable) for the design decisions and choices. It specifies both mandatory and recommended conformance points. All mandatory conformance points are compulsory for reasons of clinical utility and will form the basis of conformance assessments of the implementation in vendor software.

The guide also includes details on the data provided in the Pathology Report View XML including recommendations on which fields should be displayed and how they could be used.

No branding or colour themes have been specified, and the rendering of these are left to the vendor's discretion to allow them to blend the Pathology Report View into their product's branding. NEHTA does however recommend that vendors select a colour palette with colour contrast with reference to accessibility standards such as WCAG 2.0² and specific jurisdictional and local site recommendations for accessibility.

1.5 Points to note

1.5.1 Supporting documents

As detailed in the References section, this guide is supported by the following technical documents that describe the data, and data structure, for the View:

- *PCEHR View Service Logical Service Specification*; and
- *PCEHR View Service Technical Service Specification*.

² <http://www.w3.org/TR/WCAG20/>.

1.5.2 Structure of the presentation guide

For each section of the View, this document will describe the following.

- Example illustrations of the conformance points, including:
 - numbered references to data elements described in the bundled data usage guide.
- Conformance points listed with status, and rationale (where applicable) such that:
 - software will be expected to meet every mandatory conformance point;
 - software will be expected to meet every conditional conformance point if the software vendor declares that the software satisfies the condition state given in the conformance point; and
 - software will not be required to meet recommended conformance points but may be assessed against recommended conformance points if there is a declaration that such points have been satisfied.
- Details on the data included in the View including:
 - name and descriptions;
 - cardinality;
 - recommendations on use;
 - mapping of data elements to example screen display.
- The priority of these conformance points is given in their list order, displaying mandatory items first, and recommended items last.

Note that this guide contains common conformance points that are common across multiple PCEHR views as well as conformance points that are specific to the Pathology Report View.

1.5.3 Illustrations

The screenshots used in this guide illustrate the conformance points; they do not form the conformance points. As such, anything not explicitly mentioned in the conformance points does not form a part of the conformance points (e.g. wording, colours, fonts, font size, exact spacing).

1.5.4 Conformance process

All implementers who want their clinical information system to comply with the scope of this guide must assess the conformance of their software to the relevant requirements via NEHTA's conformance, compliance and accreditation assessment process.

Note that section 3 is provided for guidance only, and does not contain conformance testing-related requirements.

1.5.5 Accessibility assurance

PCEHR accessibility assurance is the responsibility of implementing vendors. Vendors are to determine their own requirements for a CIS to conform to accessibility standards such as WCAG 2.0 in the development of their software

solutions. Conformance with accessibility standards is encouraged but is outside the scope of assessment.

1.6 Assumptions

This document assumes the following.

- Implementations may use resolutions that differ from the screenshots in this document. Example screenshots are not intended to act as a restriction or requirement on any software displaying the Views.
- The implementer has followed all other applicable PCEHR specifications (see References section). This guide does not offer relief from any of those requirements.
- The software environment in which The Pathology Report View is presented handles the authentication of the user, and the accurate selection of a consumer's PCEHR.
- The implementer shall not be limited to the scope of this guide. An implementer is free to add further functionality to the View in their CIS system if that functionality does not contradict the mandatory requirements.

2 Presentation Guide

This presentation guide is concerned with the display of pathology report View information; that is, to show how a system retrieves and renders information via a View in a graphical user interface. This guide breaks these views down into components to provide easier understanding on how these components are to be represented in the Pathology Report View.

Example screen designs in this document depict how a clinical information system could implement the conformance points described in each section.

The blue numbered references in the screenshots map to the bundled data usage guide and is further explained in section 3.

To assist in describing some of the conformance points, examples of how the Pathology Report View conformance points could be implemented have been provided. These examples focus on the content and as such do not include CIS framework components (menu bar, navigation pane, header, footer, task bar, etc.). Note: implementers are free to add functionality not shown in the examples to their system if it does not contradict the mandatory conformance points.

2.1 View content

The following example of a Pathology Report View depicts how a clinical information system could implement the conformance points described in this section.

Pathology Report View

This is not a complete view of the individual's health information. For more information about the individual's health record or data, please consult the individual or other healthcare professionals as needed.

Specimen Collected Date

25-Nov-2011

To

25-Nov-2013

Filter

Group by

Not Grouped

1

Specimen Collected Date

2

Report Date

3

Pathology Organisation

4

Requesting Organisation

5

Pathology Discipline

6

Test Name

7

Test Status

8

Report ID

25-Nov-2012	30-Nov-2012	South Sydney Labs	Big Health Clinic	Haematology	FBC	Final	12-4506-OOPL
22-Nov-2012	23-Nov-2012	North Ryde Labs	John's Health Clinic	Haematology	FBC	Final	12-254234-YYT-1
21-Nov-2012	22-Nov-2012	North Ryde Labs	Healthy People Clinic	Biochemistry	Electrolytes	Final	12-554081-FRT-2
21-Nov-2012	22-Nov-2012	North Ryde Labs	Healthy People Clinic	Microbiology	Electrolytes	Final	12-554081-FRT-2
20-Nov-2012	23-Nov-2012	North Ryde Labs	John's Health Clinic	Forensic	SLE	Final	12-254234-YYT-1
19-Nov-2012	24-Nov-2012	South Sydney Labs	Lasting Health Clinic	Immunology	SLE	Final	12-4218-NHJT
18-Nov-2012	23-Nov-2012	North Ryde Labs	John's Health Clinic	Genetics	Cystic Fibrosis	Final	12-254234-YYT-1

Figure 1: View Content diagram

ID	Conformance Points	Status
View-CM07	The View SHALL be displayed in such a way as to allow the entire dataset to be viewed (e.g. provide vertical scrolling / paging).	Mandatory
View-CM08	The Rendering System SHALL NOT allow horizontal scrolling of the View.	Mandatory
View-CM09	The View SHALL display the following statement to healthcare providers: "This is not a complete view of the individual's health	Mandatory

ID	Conformance Points	Status
	information. For more information about the individual's health record or data, please consult the individual or other healthcare professionals as needed".	
View-CM01	The View SHALL display a title at the top of the View.	Mandatory
View-CM06	A printed View SHALL contain the page number as part of the Footer at the bottom of each page.	Mandatory
View-Path01	The View title SHALL display the text "Pathology Report View". Also see View-CM01.	Mandatory
View-CM02	The title SHOULD have a font-size larger than the font-size used in other text components in the View.	Recommended
View-CM03	The title SHOULD have a font-weight larger than the font-weight used in other text components in the View.	Recommended
View-CM05	A printed View SHOULD contain page numbers as "Page N of T" on each page as part of the Footer.	Recommended
View-CM51	Except when specifically stated within a requirement, times and time zones SHOULD NOT be displayed in the View.	Recommended

2.1.1 One or more rows available

ID	Conformance Points	Status
View-CM17	Each Document Line in the View SHALL act as a link to the source CDA [®] document in the PCEHR such that the CDA [®] document is presented first or at the same time as any PDF attached to the CD [®] document.	Mandatory
View-CM35	Text that does not fit horizontally within the available space SHALL be wrapped onto a new line. If the available space is adjustable (e.g. resizable columns) or the entire block of text can be presented by another means (e.g. a tooltip or popup box), then the View SHALL instead indicate that some text is hidden (where	Mandatory

ID	Conformance Points	Status
	<p>applicable), via an ellipsis or other means.</p> <p><i>Rationale</i></p> <p>“Available space” may mean a column, a line, the width of a page, an annotation, or other designated space designed to hold text. Space that is too narrow to hold the necessary text must support the wrapping of that text in a predictable way so that information is not lost or hidden from the reader.</p>	
View-CM04a	<p>A printed View SHALL contain, as part of the Header at the top of each page, the following consumer information:</p> <ul style="list-style-type: none"> • Family name • Given name(s), where provided • Date of birth • Sex • Individual Healthcare Identifier (IHI) <p><i>Rationale</i></p> <p>Including identifying information for the individual helps the reader of the printed view understand who the data in the view is related to.</p>	Mandatory
View-Path06	<p>The Pathology Report View SHALL display at least the following information (where provided by the payload), in any order, for each test result within a report:</p> <ul style="list-style-type: none"> • Specimen Collected Date • Report Date • Pathology Organisation • Requesting Organisation • Pathology Discipline • Test Result Name <p>Each item SHALL be described with labels, column headings or similar, so that the meaning of dates and organisations is clear.</p> <p><i>Rationale</i></p> <p>Ensuring a minimum dataset to be displayed guarantees a level of view utility.</p>	Mandatory
View-CM11	Structured DateTime values in the View	Recommended

ID	Conformance Points	Status
	SHOULD be in the format [DD-Mmm-YYYY] e.g. 14-Aug-2013	

2.1.2 No information is available

A PCEHR that contains no information or a view with restrictive filtering applied may return no results. These conformance points apply in these circumstances.



Figure 2: No information is available diagram

ID	Conformance Points	Status
View-CM10	The View SHALL only contain a single statement when no information is available: "No information is available"	Mandatory

2.2 Date filter

The date filter is a feature (mandatory conformance point) that allows the user to specify a date range and restrict the display to only those events which occurred within the period specified. This section details conformance points related to this function.

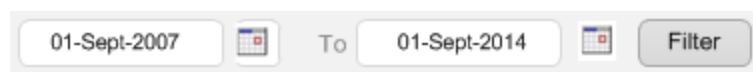


Figure 3: Date Filter sample diagram

ID	Conformance Points	Status
View-CM14	Views filtered by date SHALL display the dates entered in the Date Filter 'From' and 'To' fields to indicate the applied date range.	Mandatory
View-CM40	The "TO" date in the date filter SHALL default to today's date. <i>Rationale</i> Defaulting this date value to today's date aids usability.	Mandatory
View-CM12a	The View SHALL be able to be filtered by a date range.	Mandatory

ID	Conformance Points	Status
	<p><i>Rationale</i></p> <p>Permitting the filtering of large data sets by date increases view utility.</p>	
View-Path02	<p>The "TO" date in the date filter SHALL NOT be modified by the end user and will remain read only and defaulted to Today's date.</p> <p><i>Rationale</i></p> <p>The PCEHR system currently has a defect in the processing of the To Date filter. While this defect is being resolved, implementers must not allow the user to change the "TO" date from Today's date.</p> <p>This conformance requirement is temporary and will be removed once the PCEHR system defect has been resolved.</p>	Mandatory
View-Path12	<p>The Pathology Report information displayed on the Pathology Report View SHALL be able to be filtered using specific report information provided to the PCEHR using the following filters:</p> <ul style="list-style-type: none"> • Specimen Collected Date/Time <p><i>Rationale</i></p> <p>Consultation suggests the specimen collection date is clinically significant for purposes of filtering and should be a filter option for enhance utility.</p>	Mandatory
View-CM13	<p>The dates displayed in the 'From' and 'To' controls of the Date Filter SHOULD be in the format [DD-Mmm-YYYY] e.g. 14-Aug-2013.</p>	Recommended
View-CM15	<p>DateTime values displayed in a column SHOULD be right aligned in the View.</p>	Recommended
View-Path97	<p>The default view SHOULD be limited to 24 months calculated from current date.</p>	Recommended

2.3 Group by

The Group by function provides the user with grouping options for documents available on the Pathology Report View list.

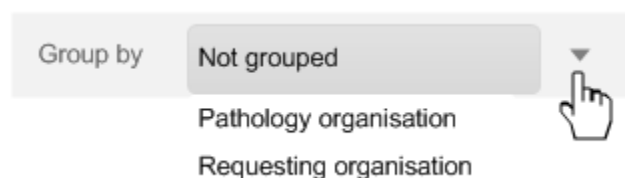


Figure 4: Group by diagram

ID	Conformance Points	Status
View-CM54	<p>Rows SHALL be sorted within the summary line they belong to. (For example, sorted within the organisation and not across organisations.)</p> <p><i>Rationale</i></p> <p>When sorting lines that are grouped it is important for lines to be sorted within the natural group they are attached to, such that context is not lost.</p>	Mandatory
View-Path08	<p>The Pathology Report View SHALL contain only the following components:</p> <p>Group by type:</p> <ul style="list-style-type: none"> • Pathology Organisation; and • Not Grouped. <p><i>Rationale</i></p> <p>Providing a Group By function increases view usability and utility.</p>	Mandatory

2.4 Ordering

If a view has more than one document line then the document lines within that view should be permitted to be ordered by preference.

Specimen Collected Date	Report Date	Pathology Organisation	Requesting Organisation	Pathology Discipline	Test Name	Test Status	Report ID
22-Nov-2012	23-Nov-2012	North Ryde Labs	John's Health Clinic	Haematology		Final	12-254234-YYT-1
21-Nov-2012	22-Nov-2012	North Ryde Labs	Healthy People Clinic	Biochemistry		Final	12-554081-FRT-2
21-Nov-2012	22-Nov-2012	North Ryde Labs	Healthy People Clinic	Microbiology		Final	12-554081-FRT-2
20-Nov-2012	23-Nov-2012	North Ryde Labs	John's Health Clinic	Forensic		Final	12-254234-YYT-1
18-Nov-2012	23-Nov-2012	North Ryde Labs	John's Health Clinic	Genetics		Final	12-254234-YYT-1
25-Nov-2012	30-Nov-2012	South Sydney Labs	Big Health Clinic	Haematology		Final	12-4506-OOPL
19-Nov-2012	24-Nov-2012	South Sydney Labs	Lasting Health Clinic	Immunology		Final	12-4218-NHJT

Figure 5: Order by Specimen Collected Date diagram

ID	Conformance Points	Status
View-Path102	<p>The View SHALL allow the user to order the rows within the view via at least the following item:</p> <ul style="list-style-type: none"> Specimen collected date <p>Unless changed by the user, the default sort order SHALL be "specimen collected date" in reverse chronological order.</p>	Mandatory
View-CM36	<p>Ordering items by date SHOULD be done using dates in a common time zone (e.g. UTC).</p> <p><i>Rationale</i></p> <p>All the date ordering specified in this guide uses time zone aware dates.</p> <p>Failure to sort dates on a common time-zone may result in data appearing out of sequence and detracting from the user experience.</p>	Recommended

2.5 Collapsed and expanded items view

Clinical information systems may opt to display PCEHR Pathology Report items in a collapsed summary format. In this case users will be able to select a Summary Line item to display details of the pathology results for each Summary Line item. This section outlines the conformance requirements for systems that opt to use this approach for displaying Pathology Report items.

Specimen Collected Date To

Group by

Specimen Collected Date	Report Date	Pathology Organisation	Requesting Organisation	Pathology Discipline	Test Name	Test Status	Report ID
[-] Requesting Organisation: Big Health Clinic – 1 Report (Report Date on 30 Nov 2012)							
[-] Requesting Organisation: Big Health Clinic - 1 Test (Specimen Collected Date on 25-Nov-2012) (Report #: 12-4506-OOPL)							
25-Nov-2012	30-Nov-2012	South Sydney Labs	Big Health Clinic	Microbiology	C+S	Final	12-4506-OOPL
[+] Requesting Organisation: Healthy People Clinic – 1 Report (Report Date on 22-Nov-2012)							
[-] Requesting Organisation: John's Health Clinic – 1 Report (Report Date on 23-Nov-2012)							
[-] Requesting Organisation: John's Health Clinic, 2 Tests (Specimen Collected Date from 18 Nov 2012 to 23 Nov 2012) (Report #: 12-254234-YYY-1)							
20-Nov-2012	23-Nov-2012	North Ryde Labs	John's Health Clinic	Immunology	ANA	Final	12-254234-YYT-1
22-Nov-2012	23-Nov-2012	North Ryde Labs	John's Health Clinic	Microbiology	C+S	Final	12-254234-YYT-1

Figure 6: Collapsed and expanded View diagram

ID	Conformance Points	Status
View-CM30	Collapsed Summary Line displayed in the View SHALL be expandable.	Mandatory
View-CM33	The View SHALL display Summary and Document lines in a way that visually separates them (e.g. with alternate shading or a line).	Mandatory
View-CM20	Text based data used for ordering Summary Lines in the View SHALL be ordered in ascending alphabetical order. Note: Alphabetical order includes the ordering of alphanumeric characters (letters and numbers) as well as the ordering of symbols. Ordering should maintain the standard applied within other areas of the system.	Mandatory
View-CM31	Expanded Summary Line displayed in the View SHOULD be collapsible.	Recommended
View-CM29	The Summary Line in the View SHOULD be displayed as collapsed rows by default.	Recommended
View-CM32	Collapsing and expanding Summary Line in the View SHOULD be possible by clicking on any part of the Summary Line.	Recommended
View-CM26	Each Document Line SHOULD have a 'roll-over' state, activated by the movement of the mouse cursor over any part of the Item, with a font colour that provides colour differentiation according to accessibility standards.	Recommended
View-CM24	When the mouse cursor is rolled over any part of the Document Line in the View, the background of the entire Document Line SHOULD be highlighted.	Recommended
View-CM23	When the mouse cursor is rolled over any part of the Summary Line in the View, the background of the entire Summary Line SHOULD be highlighted.	Recommended
View-CM25	Each Summary Line SHOULD have a 'roll-over' state, activated by the movement of the mouse cursor over any part of the Item, with a font colour that provides colour differentiation according to accessibility standards.	Recommended

3 Data usage

The accompanying spreadsheet (data usage guide) provides guidance and recommendations on how the View XML can be used for screen display, but does not contain testable requirements for conformance, compliance and accreditation purposes, or other similar processes.

The spreadsheet is derived from the PCEHR View XML and includes:

- data element name;
- numbered references to sample screen layouts in section 2;
- data element description;
- cardinality; and
- recommendation for use.

The screenshots in this document include numbered references that map to column A in the spreadsheet. A developer wishing to locate a particular data item in the XML stream can use the numbered references to map data items in the screenshots to the data usage guide spreadsheet. Not every element in the XML stream has been represented on the screenshots. The screenshots and numbered references are not exhaustive but are a guide to developers.

Acronyms

Acronym	Description
CCA	conformance, compliance and accreditation
CDA®	Clinical Document Architecture
CIS	clinical information system
IHI	individual healthcare identifier
NIO	national infrastructure operator
PCEHR	personally controlled electronic health record
UTC	Coordinated Universal Time
WCAG	Web Content Accessibility Guidelines

Glossary

Term	Meaning
Clinical Document Architecture	An XML-based mark-up standard intended to specify the encoding, structure, and semantics of clinical documents for exchange. CDA® is an ANSI-certified standard from Health Level Seven International.
Component	Grouping of related information.
dataset	Information available for a given view.
document line	A row within the view representing a single document is called a document line. Typically, the row or line can be clicked and the document that line is representing can be opened and viewed.
implementer	A person or organisation that is putting a technical solution in place. Typically an organisation with software developers or a software vendor.
Individual Healthcare Identifier	A unique 16 digit number that identifies individuals within Australia who receive healthcare, for example Australian citizens, permanent residents or visitors to Australia.
Pathology Discipline	The Pathology Discipline is a broad categorisation of the pathology results contained in a report largely grouped by the testing methods used or the types of disease being investigated e.g. Haematology.
Payload	The information or data provided from the PCEHR to the end system requesting the View.
Present in View Payload	This indicates if the attribute will be provided by the PCEHR in any view requested by a CIS. This does not indicate it will be available in the CIS user interface, report or clinical document – only that it is provided in the view payload.
roll-over	The act of moving a mouse pointer over an area, button or other screen control. A term used in a graphical user interface context.
SHALL	The term SHALL in a requirement indicates a mandatory requirement. Its negative form SHALL NOT indicates a prohibition.
SHOULD	The term SHOULD in a requirement indicates a recommendation. Its negative form SHOULD NOT indicates an option that is not recommended.
Summary Line	A row of text that is a short description of information that could be expanded and viewed directly below.
View	Display of related information in a structured way.

References

NEHTA, *PCEHR View Service Logical Service Specification* v1.4, November 2014.
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