



Release note

Event Summary version 1.1

21st March 2012

Summary

Introduction

A Personally-Controlled Electronic Health Record (PCEHR) can contain Event Summaries, in addition to a number of other clinical documents relating to their healthcare, including Discharge Summaries, Referrals, Specialist Letters and Pathology Reports.

An Event Summary is used to capture health information about a significant healthcare event as relevant to be shared.

Event Summaries can be uploaded to the PCEHR System by any participating healthcare provider.

An Event Summary is intended to be used to record information about a significant event, when no other type of clinical document is appropriate. It can be used in cases where clinical document types have yet to be developed.

The Event Summary package forms part of the foundational set of specifications to support the development of an individual's PCEHR.

Background to this Release

This is a re-release of the Event Summary Solution Bundle, which was originally published on 2 December 2011. Issues were identified with the CDA Implementation Guide associated with this release, as well as inconsistencies between Solution Bundles, where there were technical inconsistencies in the Guides that may have caused confusion for implementers. Therefore NEHTA decided to withdraw the bundle components (CDA Implementation Guide and Sample Code) released in December, rectify them, and re-release the amended Solution Bundle. In addition to the re-released CDA Implementation Guides, NEHTA is also releasing additional products, as listed below, designed to assist vendors to test messages generated from their software. The additional product components are provided to promote greater clarity for vendors through the implementation process.

Release rationale

This release bundle has been updated to support the Event Summary availability via the PCEHR. The Solution Bundle includes updates to the CDA Implementation Guide as informed by several NEHTA teams (Implementation; Compliance, Conformance and Accreditation; Reference Platform; and Clinical Terminology and Information). Other products have been updated as a result of the CDA Implementation Guide re-release including Point to Point Logical Service Specification and Technical Service Specification. Additional product components in this release include Schematron Libraries, CDA Library, CDA Validator and Clinical Document Test Data to assist vendors to test message capability and conformance.

Scope

The aim of an Event Summary is to provide information to the individual's Personally Controlled Electronic Health Record (PCEHR) of significant healthcare events, at the discretion of the clinician, with the consent of the individual. The information may be used by the nominated primary provider to update their local record and the PCEHR.

The *PCEHR Concept of Operations* states that "an Event Summary is used to capture key health information about significant healthcare events that are relevant to the ongoing care of an individual." Event Summaries can be submitted to the PCEHR System by any participating organisation.

Release history

Version	Date	Comment
Event Summary 1.0	2 nd December 2011	PCEHR Release

Stakeholders

The following stakeholders have been involved in the development and testing of this release:

- Continuity of Care Reference Group (NEHTA stakeholders)
- Clinical Terminology and Information (NEHTA)
- Compliance, Conformance and Accreditation (NEHTA)
- Reference Platform (NEHTA)
- Implementations (NEHTA)

Audience

The intended audience of this document includes:

- Early adopter hospital networks, Lead eHealth Implementation sites and jurisdictional health departments in the process of planning, implementing or upgrading discharge summary systems.
- Software vendors developing discharge summary system products.
- Early adopter GP desktop software vendors.
- Senior managers and policy makers, clinical experts, Health Information Managers, IT operations and support teams, and system integrators.
- Technical and non-technical readers.

Additions

The following new products are associated with this Solution Bundle release to assist vendors to build and test the new messaging capability:

- Event Summary Schematron Library
- Event Summary Clinical Document Test Data
- Event Summary CDA Library – Sample Code
- CDA Validator
- CDA Rendering Specification

These additional products (except for CDA Rendering Specification) are initially available as a limited release to enable a small group to test them before being generally available to the broader vendor community. For further details on access to this limited release please send an email to nehtasupport@nehta.gov.au.

Changes

Refer to the "Change Log" located at the back of each specification. This itemises all changes between specification versions.

Removals

- None.

Support

For further support or to provide feedback, please email the NEHTA Service Desk at nehtasupport@nehta.gov.au or phone on 1300 901 001.

Future releases

These specifications will soon be implemented in a clinical setting. While NEHTA has consulted extensively with clinical, consumer, government and vendor stakeholders on the specifications over past years, implementation will provide new feedback on the use and suitability of the specifications within a clinical workflow. NEHTA has established feedback mechanisms from known implementations in Lead eHealth Implementation sites. NEHTA requests any other implementers involved in using software built to the specifications in a clinical setting to contact the NEHTA Service Desk.

Updated versions of specifications will be scheduled for release (post – July 2012 and tied into the release of the Standards Australia publications where this is applicable) and may be required to address additional lessons learnt through implementations, to provide new features or enhancements and respond to advice from the vendor and standards community engagement.

Any changes to planned release cycles will comply with criteria for specification release as set out in the *NEHTA Specifications and Standards Plan*, as agreed with industry stakeholders and published in 2011.

Solution Bundle Content

Structured Content Specification	
Information Requirements v1.1	(unchanged)
Structured Content Specification v1.1	(unchanged)
Technical Services Specification	
Event Summary CDA Implementation Guide v1.2	(replaces v1.1)
CDA Rendering Specification v1.0 (Common message rendering specification. Located in "Common Specifications Folder".)	(new product)
CDA Package v1.0 (Common logical model for bundling of clinical documents with referenced attachments. Located in "Common Specifications Folder".)	(unchanged)
eHealth Conformance profile	
Event Summary Conformance Profile for Clinical Documents v1.1	(replaces v1.0)
Conformance Profile for Clinical Documents – Common v1.2 (Located in "Common Specifications Folder".)	(replaces v1.1)

Clarifications

(Refers to Event Summary CDA Implementation Guide v1.2)

Clinical

Medical History

A number of NEHTA clinical content specifications (Structured Content Specifications – SCS) contain an information component known as Medical History (also known as “Current and Past Medical History”).

NEHTA specifications on Referral, Specialist Letter, Shared Health Summary and Event Summary contain an information component known as *Medical History* (also known as “Current and Past Medical History”). Clinically speaking, Medical History in the Discharge Summary is represented by Primary Problem/Diagnosis, Co-Morbidity and Clinical Interventions.

Structuring Medical History Clinical Information Model

The *Medical History* information structure contains two distinct categories:

- *Problem/Diagnosis* and *Procedure* to meet information capturing and persistence requirements of acute care/hospital sector; or
- Uncategorised *Other Medical History Item* to meet information capturing and viewing requirements of primary care/general practice sector.

The design intent is for software vendors to design for the first two data categories:

- *Problem/Diagnosis* and
- *Procedure*

The constraint for use is to use EITHER “*Problem/Diagnosis*” and “*Procedure*” OR “*Other Medical History Item*”, but NOT both.

These categorisations are technical design decisions and do not impose any rendering constraints on the clinical desktop applications used by healthcare providers. These items can be rendered using screen names in accordance to the preferences of individual healthcare providers or the healthcare sector.

It is also acknowledged that the technical name “*Other Medical History Item*” can be misinterpreted during technical implementation as relatively unimportant medical history items. For clinical safety reasons, it was decided that this technical name will be changed to “*uncategorised medical history*” and include a clear definition and description of this item in the next release.

Processing of Medical History Data by Local Clinical Systems

The different *medical history* information structures may create information reconciliation challenges for importing clinical systems when attempting to extract and load medical history information from the eDischarge Summary, Event Summary or Shared Health Summary, etc. into local databases with different information structures. Uncategorised *Medical History* items, if encoded in SNOMED CT¹ codes, can be algorithmically analysed, categorised using the SNOMED CT codes and stored as *Problem/Diagnosis* or *Procedure* items accordingly. Unencoded items will require manual processing before they can be incorporated into local databases.

For clinical safety reasons, linkage must be maintained between extracted data that are stored in local databases and the source *Medical History* data from the downloaded CDA document which should also be persisted in its entirety.

¹ IHTSDO®, SNOMED® and SNOMED CT® are registered trademarks of the International Health Terminology Standards Development Organisation.

Please note that duplicate medical history entries may result if uncategorised *Medical History* data are extracted and incorporated into local system databases without undergoing algorithmic or manual reconciliation processes.

Patient Medicines Change Type Code Values

NEHTA specifications for *Specialist Letter and Event Summary* contain a "Medication" section which is used to transmit information about a patient's medicine. It contains a number of data items to indicate change(s) to a patient's medicine(s) that have been made by the authoring healthcare provider: *change type*, *change status* (i.e. whether the action is an actual change or it is a recommendation to change), *change description* and *change reason(s)*.

The *change type* data item is of *data type* "coded text". A national codeset of change type values (code system OID = "1.2.36.1.2002.1001.101.104.16592") has been recommended for use with the change type data item. A code definition of this codeset will be published by NEHTA following this release.

Technical

"NullFlavour Attributes"

It has been brought to NEHTA's attention that, for certain items with cardinality [1..n], the CDA Implementation Guides are unclear regarding whether a "NullFlavour" attribute may be used in place of providing proper data. A clarifying release note will be published in April 2012 following consultation with stakeholders, providing this information for each affected item and schematrons will be updated accordingly.

Representing fully structured addresses

The Structured Content Specifications use the address model defined in the participation specification and that is based on the address models defined in AS 5017 and 4846. These divide a real world address into a highly structured address that is consistent with the official Australia Post database (called the PAF). AS 5017 has 17 fields for address. Most implementations (in and outside health) do not collect this many fields. The norm is between 1-3 lines of text, followed by suburb, state, postcode, and country, though systems vary wildly. The HI Service address type uses a full AS 5017 structure.

Because of this, the NEHTA address model for Australian addresses (as defined in the Participation Specification) has the following fields:

- Unstructured Address Line [0..*]
- STRUCTURED ADDRESS LINE [0..1]
- Suburb/Town/Locality [0..1]
- State/Territory [0..1]
- Postcode [0..1]
- Delivery Point Identifier [0..1]

And the Structured Address line in turn has the following elements:

- Unit Type
- Unit Number
- Address Site Name
- Level Type
- Level Number
- Street Number
- Lot Number
- Street Name

- Street Type
- Street Suffix
- Postal Delivery Type
- Postal Delivery Number

All have cardinality [0..1]. For definitions of these, consult AS 5017.

So an address can either contain multiple unstructured lines, or can populate the structured fields. If both are populated, they should agree.

Issues will be encountered when any of the address types in either HL7 v2 or CDA are used. For CDA, the address type is AD from the v3 data types R1. This doesn't have the same finely granulated fields as AS 5017, and as a consequence, the mapping cannot be a round trip 1:1 mapping. Therefore, an address fully structured as above cannot be (per AS 5017) represented in the CDA document, and still be able to identify the parts. This table summarises the mappings:

Field Name	Address Element Name
Unstructured Address Line	StreetAddressLine
STRUCTURED ADDRESS LINE:	
Unit Type	unitType
Unit Number	unitID
Address Site Name	additionalLocator
Level Type	additionalLocator
Level Number	additionalLocator
Street Number	houseNumber
Lot Number	additionalLocator
Street Name	streetName
Street Type	streetNameType
Street Suffix	direction
Postal Delivery Type	deliveryAddressLine
Postal Delivery Number	deliveryAddressLine
Suburb/Town/Locality	city
State/Territory	state
Postcode	postalCode
Delivery Point Identifier	additionalLocator

As a consequence of this, in the CDA document, it is not possible to distinguish the difference between Address Site Name, Level Type, Level Number, Lot Number, and the Delivery Point Identifier, and between Postal Delivery Type and Postal Delivery Number. In practice, most systems use the simple address model, and will be unaffected by this. Systems that use a fully specified address per AS 5017, or that endeavour to match addresses against the PAF will need to continue to use special matching algorithms/software to overcome the CDA limitations here (as would already be required to overcome v2 limitations).

Any system that populates the structured address should also populate one or more unstructured address lines too.

Representing MRNs and other identifiers

This specification provides a code element on ex:asEntityIdentifier that may be used to indicate the type of an identifier for non-national identifiers such as IHI, HPI-I, HPI-O. However in this version, the specification does not specify a value set that should be used in the code element. This will be addressed in a future version. The HL7 v2 table 0203 is a candidate for interim use (see <http://www.healthintersections.com.au/?p=721> for examples).

Mapping error in imaging examination report/result group/anatomical location

The mapping for "Anatomical Location" in "Imaging Examination Result Group" is incorrect – it is attached to the individual results rather than the group of results by virtue of the context: `entryRelationship[im_res_gp]/organizer/component[ind_im_res]/observation/targetSiteCode` (should not use `ind_im_res` in the context). This will be fixed in future versions of the specification, and this mapping should not be used. Please consult NEHTA if the use of this data element is required.

SNOMED CT-AU version issues

This specification uses some SNOMED CT-AU codes for identifying sections and entries, and identifies these as being taken from a particular SNOMED CT-AU release. Future specifications will clarify whether implementations are required to identify this particular version or any other in the CDA documents. In addition, the specification may contain example fragments using older releases of either SNOMED CT or SNOMED CT-AU. These older versions of SNOMED CT and SNOMED CT-AU should not be in use in Australia: these examples will be fixed in a future release. The syntax of the `codeSystemVersion` attributes may be affected by ongoing IHTSDO deliberations about how to represent SNOMED CT versions.

Representation of Diagnostic Reports

The new industry practice, which aligns with IT-14 standards currently in preparation, is to send multiple different formats for diagnostic service reports (e.g. PDF, RTF, XHTML). Each report contains the same content, but the renderer can choose the format that they are best able to support when showing the content (depending on platform and tools available). This is what is intended when the definition of the Test Result Representation includes the remark:

"Multiple formats are allowed but they must be semantically equivalent".

The cardinality of the Test result Representation is [0..1] in this specification, and therefore precludes sending multiple formats. This issue will be addressed in a future release. The same issue applies to the Examination Report Representation, though its definition does not include a "multiple formats" note.

Conformance Criteria

The Common Conformance Profile for Clinical Documents defines five levels of conformance for clinical documents. These are levels 1A, 1B, 2, 3A and 3B, where 3B is the highest. A minimum level of conformance applies to clinical documents sent to the PCEHR System. The minimum level for a specific type of clinical document is specified in the associated PCEHR Conformance Profile. Documents sent to the PCEHR System that do not meet the minimum level of conformance will be automatically rejected. For most document types the minimum level of conformance is 1A but for some document types the minimum conformance level is 3A. NEHTA welcomes feedback about the minimum level of conformance from early adopters of the PCEHR System. There is an opportunity to adjust the minimum conformance level based on this feedback.

Please note that the minimum conformance level required for a conformant implementation of the Event Summary is defined as 1B, specifically this requires that the clinical document consist of :

- i. A CDA body in XML format; and
- ii. A CDA body that includes at least one section which contains a narrative block.

This minimum conformance level is specified in the PCEHR Conformance Profile for Event Summary Clinical Documents v1.2.