

How to represent patient identifiers (other than IHIs) in CDA documents?

Context

The existing CDA implementation guides allow for two patient identifiers: the patient’s IHI and an internal technical identifier.

Patient IHI

The IHI is found in the Entity Identifier:

Subject of Care > Participant > Entity Identifier	A number or code issued for the purpose of identifying a participant within a healthcare context.	1..*	recordTarget/patientRole/patient/<Entity Identifier>	The value of one Entity Identifier SHALL be an Australian IHI.
---	---	------	--	---

An example of this in the CDA document is:

```
<!--Incomplete Fragment: -->
<recordTarget>
  <patientRole>
    <patient>
      <ext:asEntityIdentifier classCode="IDENT">
        <ext:id assigningAuthorityName="IHI"
          root="1.2.36.1.2001.1003.0.8003601234512345"/>
        <ext:assigningGeographicArea classCode="PLC">
          <ext:name>National Identifier</ext:name>
        </ext:assigningGeographicArea>
      </ext:asEntityIdentifier>
    </patient>
  </patientRole>
</recordTarget>
```

Internal technical identifier

The internal technical identifier is found on the patient Role:

1..1	recordTarget/patientRole/id	UUID 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.	Required CDA element. If there are any entitlements for Subject of Care this value MUST be the same as: ClinicalDocument/ component/ structuredBody/ component{admin_obs}/ section/ entry/ act/ participant/ participantRole/ id where participantRole/ @classCode = "PAT".
------	-----------------------------	--	---

An example of this in the CDA document is:

```
<!--Incomplete Fragment: -->
<recordTarget>
  <patientRole>
    <!-- This system generated id is used for matching patient details
      such as Entitlement, Date of Birth Details and Age Details -->
    <id root="7AA0BAAC-0CD0-11E0-9516-4350DFD72085"/>
  </patientRole>
</recordTarget>
```

Notes

- This is a system identifier used for internal matching within the document; it is not intended to be a human identifier. It would usually be populated with the internal primary key of the patient record on the sending system and should not be shown to humans.
- The note that implies that this must be a UUID (3rd column in example above) is not correct and will be corrected in future versions of all CDA implementation guides.

The CDA implementation guides specify the IHI only (rather than other patient identifiers) and a technical identifier, because they were designed for use in a world where IHI adoption is ubiquitous. However not every patient has an IHI and the institutional wave sites will need to exchange one or more institution identifiers for their patients in addition to their patients' IHIs, if they are available.

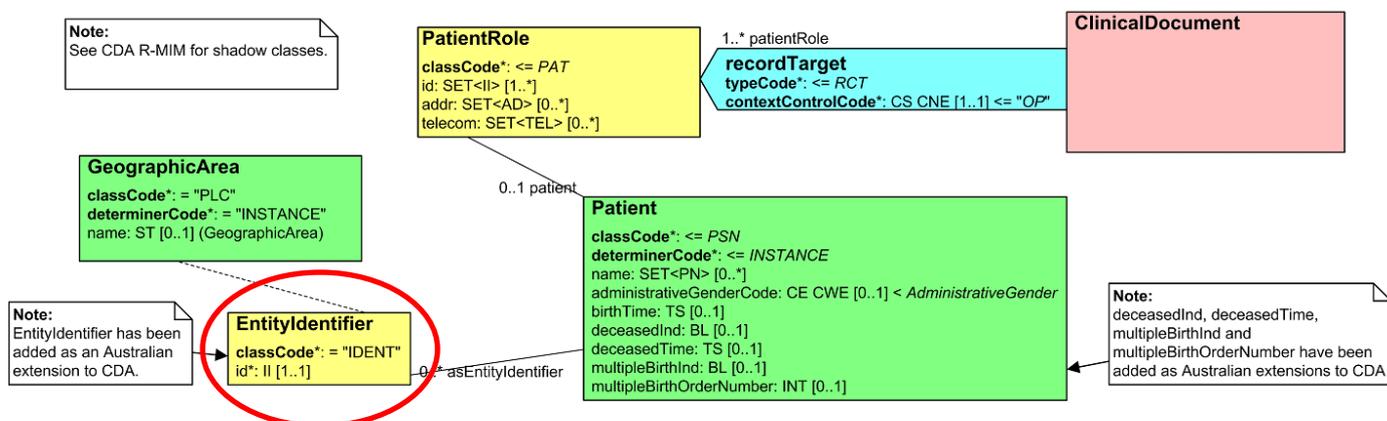
This FAQ describes how to represent these other identifiers in CDA documents. The rendering specification details that some of these extra identifiers will be picked up by the style sheet and displayed to the user.

Standards compliance note

This solution follows the standard v3 identifier pattern (see [http://wiki.hl7.org/index.php?title=Identifiers IM Design Pattern](http://wiki.hl7.org/index.php?title=Identifiers_IM_Design_Pattern)).

Answer

Additional patient identifiers (MRN/URNs, state health identifiers, etc.) are conveyed by repeating the EntityIdentifier class:



This class already carries the IHI and is labelled with cardinality 0..*. To represent additional identifiers, add repeats with these additional identifiers.

For example, a patient with an IHI of 8003 6012 3451 2345 and an MRN of 123456 would be represented as follows:

```
<!--Incomplete Fragment: -->
<recordTarget>
  <patientRole>
    <patient>
      <ext:asEntityIdentifier classCode="IDENT">
        <ext:id assigningAuthorityName="IHI"
          root="1.2.36.1.2001.1003.0.8003601234512345"/>
        <ext:assigningGeographicArea classCode="PLC">
          <ext:name>National Identifier</ext:name>
        </ext:assigningGeographicArea>
      </ext:asEntityIdentifier>
      <ext:asEntityIdentifier classCode="IDENT">
        <ext:id assigningAuthorityName="Acme Hosp"
          root="1.2.3..." extension="123456"/>
      </ext:asEntityIdentifier>
    </patient>
  </patientRole>
</recordTarget>
```

Because a MRN/URN isn't assigned against a geographic area, no geographic area is identified. A specific OID for the ACME Hospital identifier must be registered (you can request help from your NEHTA contact with this process).

One issue with the above XML fragment is that there's no general way for a stylesheet (or any other software) to extract the MRN, since every institution will have a different OID for their MRN. While every OID is registered with the HL7 OID registry, it's not practical to query that registry for an OID and determine its type on the fly.

To solve this problem, a "code" attribute is added to the EntityIdentifier (from the RIM Entity.code attribute). (Note that earlier versions of the diagram above – in old CDA implementation guides – had this code attribute on the EntityIdentifier, but it was removed in the belief that an IHI would be all that was needed). The code attribute is used to define what type of identifier is carried in the asEntityIdentifier element. In order to simplify the implementation, the code attribute uses the HL7 v2 identifier type codes (Table 0203):

```
<!--Incomplete Fragment: -->
<recordTarget>
  <patientRole>
    <patient>
      <ext:asEntityIdentifier classCode="IDENT">
        <ext:id assigningAuthorityName="IHI"
          root="1.2.36.1.2001.1003.0.8003601234512345"/>
        <ext:assigningGeographicArea classCode="PLC">
          <ext:name>National Identifier</ext:name>
        </ext:assigningGeographicArea>
      </ext:asEntityIdentifier>
      <ext:asEntityIdentifier classCode="IDENT">
        <ext:code code="MR" codeSystem="2.16.840.1.113883.12.203"/>
        <ext:id assigningAuthorityName="Acme Hosp"
          root="1.2.3..." extension="123456"/>
      </ext:asEntityIdentifier>
    </patient>
  </patientRole>
</recordTarget>
```

The OID 2.16.840.1.113883.12.203 identifies the v2 identifier type table. MR is the v2 code for medical record.

Note that this same pattern can be used for state health identifiers, etc. You will need to use the appropriate code from the v2 table 0203. For some of these identifiers, a geographic area will also be appropriate.

Note that future versions of the CDA implementation guides will include the code attribute in order to support this usage. Updated schemas will also be released with these implementation guides.

First published: 11 November 2011

Revision 1: 4 March 2013, updated to new format, title change to better reflect content, minor edits for consistency.

Contact for enquiries

Telephone: 1300 901 001 or email: servicedesk@nehta.gov.au

Disclaimer

The National E-Health Transition Authority Ltd (NEHTA) makes the information and other material ('Information') in this document available in good faith but without any representation or warranty as to its accuracy or completeness. NEHTA cannot accept any responsibility for the consequences of any use of the Information. As the Information is of a general nature only, it is up to any person using or relying on the Information to ensure that it is accurate, complete and suitable for the circumstances of its use.

Copyright © 2011-2013 National E-Health Transition Authority Ltd

This document contains information which is protected by copyright. All Rights Reserved. No part of this work may be reproduced or used in any form or by any means—graphic, electronic, or mechanical, including photocopying, recording, taping, or information storage and retrieval systems—without the permission of NEHTA. All copies of this document must include the copyright and other information contained on this page.