

How should the specialty field be used in an eDischarge Summary?

Background

The various documents pertaining to eDischarge Summary are not fully aligned with regard to the specialty field.

The core information components says:

Specialties	C, E	Codeable Text	1..Many	A reverse chronological list of the clinical specialties under which the patient was treated during the encounter (i.e. the last specialty appears first). Each specialty should only appear once in the list, in its first (i.e. most recent) position.
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The structured document template says:

4.6 Specialty

Identification

Name	Specialty
Metadata Type	Data Element
Identifier	DE-16028
OID	1.2.36.1.2001.1001.101.103.16028

Definition

Definition	The clinical specialty under which the subject of care was treated during the encounter.
Definition Source	NEHTA
Synonymous Names	
Notes	When the subject of care has been managed by multiple clinical specialities during the encounter/event, each specialty should only appear once. The specialties are in reverse chronological order (i.e. the last specialty appears first) so that the subject of care's journey during the healthcare event can be readily discerned.
Data Type	CodeableText
Value Domain	Specialty Values

Usage

Examples	<ol style="list-style-type: none"> 1. Specialist urogynaecologist 2. Specialist paediatric gastroenterologist and hepatologist 3. Specialist otolaryngologist - head and neck surgeon
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and

Identification	
Name	Specialty Values
Metadata Type	Value Domain
Identifier	VD-16028
OID	1.2.36.1.2001.1001.101.104.16028
Definition	
Definition	The set of values for the clinical specialty under which the subject of care was treated during the encounter.
Definition Source	NEHTA
Value Domain	
Source	Medical Board of Australia: Medical Specialties and Specialty Fields [MBA2010a]

The reference above is to

[MBA2010a]	Medical Board of Australia, 31 March 2010, <i>List of specialties, fields and related titles Registration Standard</i> , July 2010, accessed 2 November 2011. http://www.medicalboard.gov.au/Registration-Standards.aspx
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This reference is available here:

<http://www.medicalboard.gov.au/documents/default.aspx?record=WD10%2f106&dbid=AP&chksum=07LyDUkqqYa5O5LXuqbSzg%3d%3d>

The CDA implementation guide says:

Encounter > Specialty	The clinical specialty under which the patient was treated during the encounter.	1..*	entry[specialty]		
			entry[specialty] @typeCode="DRIV"		
			entry[specialty] observation		
			entry[specialty] observation@classCode="OBS"		
			entry[specialty] observation@moodCode="EVN"		
			entry[specialty] observation/code	Medical Board of Australia: Medical Specialties and Specialty Fields [MBA2010a]	See <code><code></code> for available attributes.
			entry[specialty] observation/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.	See <code><id></code> for available attributes.
	entry[specialty] observation/value:LIST<CD>	NS			

And has this example:

```

        <!-- Begin Encounter - Specialty (Administrative Observations) -->
<entry typeCode="DRIV"><!-- [specialty] -->
  <observation classCode="OBS" moodCode="EVN">

    <!-- ID is used for system purposes such as matching -->
    <id root="A27F2F28-C379-11DE-9550-A59055D89593"/>
    <code code="103.16028"
      codeSystem="1.2.36.1.2001.1001.101"
      codeSystemName="NCTIS Data Components"
      displayName="Specialty"/>

    <value code="394582007"
      codeSystem="2.16.840.1.113883.6.96"
      codeSystemName="SNOMED-CT"
      codeSystemVersion="20090731"
      displayName="Dermatology"
      xsi:type="CD"/>
    <value code="408459003"
      codeSystem="2.16.840.1.113883.6.96"
      codeSystemName="SNOMED-CT"
      codeSystemVersion="20090731"
      displayName="Paediatric cardiology"
      xsi:type="CD"/>
    <value code="394810000"
      codeSystem="2.16.840.1.113883.6.96"
      codeSystemName="SNOMED-CT"
      codeSystemVersion="20090731"
      displayName="Rheumatology"
      xsi:type="CD"/>
  </observation>
</entry>
<!-- End Encounter - Specialty (Administrative Observations) -->
    
```

The test data has:

Test #1:

	Speciality	Specialist psychiatrist
	Speciality	Specialist plastic surgeon
	Speciality	Specialist emergency physician

Test #2:

	Specialty	Specialist emergency physician
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According to the PCEHR Document Exchange Service Logical Service Specification, the metadata includes these fields:

Clinical Specialty Code	String	A code identifying the clinical specialty where the event relating to this document submission request initiated.	1
Clinical Specialty Display Name	String	A display friendly name for the above specialty.	1

And the fields have the following rules:

- DEXS-L 117** The Clinical Specialty Code SHALL be set to a value specified within the Concept Code column in Table 32 in Appendix B.
- DEXS-L 118** The Clinical Specialty Name SHALL be set to the Display Name in Table 32 in Appendix B, which directly corresponds to the Clinical Specialty Code provided within the message.

Table 32 specifies the codes:

Table 32 – Clinical Specialty Code value set

Coding System	Concept Code	Display Name
ANZSIC	7000-6	Software installation service
ANZSIC	8401-17	Veterans Affairs Hospital
ANZSIC	8511-2	General medical practitioner service
ANZSIC	8530-11	Midwifery service

In the PCEHR Document Exchange Technical Service Specification, the Clinical Specialty code is mapped to the XDS field practiceSettingCode.

Problems

Several issues arise from this set of specifications.

- The correct spelling is “specialty” not “speciality”, but implementers should be alert that this is a common misspelling that appears occasionally in NEHTA documents.
- It is not clear which values from the specialties list can be used.
- The specialty list is a list of values, not a list of codes.
- The CDA mapping and example instance disagree with each other and are both wrong.
- It is not clear how extensibility is handled.
- Do systems really have to support multiple values?
- The document metadata uses a different set of codes to the document.

Which values can be used?

The structured content specification says “Medical Specialties and Specialty Fields”. This means any value from the first two columns in the Medical Board of Australia reference above.

Specialty	Fields of specialty practice	Specialist titles
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In other words, the specialist titles are not included; however the values provided in the references are not codes. The correct list of codes is found in the Meteor value domain 329673 “Clinical specialties code” (<http://meteor.aihw.gov.au/content/index.phtml/itemId/329673>).

The test data is taken from the specialist titles column. The correct test data is:

Test #1:

- Psychiatry (Meteor Code 54)
- Plastic surgery (Meteor Code 52)
- Emergency medicine (Meteor Code 17)

Test #2:

- Emergency medicine (Meteor Code 17)

Extensibility

Implementers are not required to map all their specialties to the list of clinical specialties codes – if they use additional specialties that don't have a clinical specialty code, then they can simply provide the text description directly.

Representing specialty codes

The correct way to represent a specialty code from Meteor is:

```
<value code="14" codeSystem="2.16.840.1.113883.3.879.329673"
  displayName="Dermatology" xsi:type="CD"/>
```

The OID 2.16.840.1.113883.3.879.329673 represents the Meteor code system. The code and displayName are taken from the Meteor clinical specialties codes. Note that there is no codeSystemVersion for Meteor code systems.

If the specialty doesn't map to an existing specialty defined by Meteor, then the correct representation is this:

```
<value xsi:type="CD"/>
  <originalText value="Medical"/>
</value>
```

A more likely circumstance is that the local name of the specialty has a slightly different scope to the Meteor code. For example, the local clinical specialty of "Emergency Extended Care Unit" has the correct Meteor code 17 ("Emergency medicine"). This is not a precise match, so the appropriate representation is:

```
<value code="17" codeSystem="2.16.840.1.113883.3.879.329673"
  displayName="Emergency medicine" xsi:type="CD"/>
  <originalText value="Emergency Extended Care Unit"/>
</value>
```

Best practice is always to include the original text, whether the text is a precise match or not.

CDA Representation

The proper representation for clinical specialty in CDA is as follows:

```
<entry typeCode="DRIV">
  <!-- [specialty] -->
  <observation classCode="OBS" moodCode="EVN">
    <code code="103.16028" codeSystem="1.2.36.1.2001.1001.101"
      codeSystemName="NCTIS Data Components" displayName="Specialty"/>
    <value code="17" codeSystem="2.16.840.1.113883.3.879.329673"
      displayName="Emergency medicine" xsi:type="CD"/>
    <originalText value="Emergency Extended Care Unit"/>
  </value>
  <value code="46" codeSystem="2.16.840.1.113883.3.879.329673"
    displayName="Paediatrics" xsi:type="CD"/>
    <originalText value="Paediatric Medicine"/>
  </value>
  </observation>
</entry>
```

The mapping table should show the observation code mapped to the fixed NCTIS code shown in the above example, and the value bound to the meteor code system. This will be corrected in future releases.

Warning

Due to implementation timing, not all providers of discharge summaries are in a position to follow this advice. Any systems extracting specialty data from CDA documents must be aware that documents need not conform to this advice and that the CDA validation infrastructure does not enforce this advice.

Support for multiple values

The specifications allow for multiple values to reflect that patients will often be transferred between specialties during an admission. The test data includes multiple specialties to test for this capacity; however, not all discharge summary producing systems are able to support multiple specialties.

NEHTA encourages such systems to enhance their support for multiple specialties, but does not require this as a precondition of providing discharge summaries to the PCEHR System.

Document metadata in the XDS

The specialty code in the discharge summary (Meteor) and the specialty code in the document metadata (ANZIC code) have different and incompatible value sets and cardinality. This presents a challenge for any system producing discharge summaries and uploading them to the PCEHR system.

The Clinical Specialty Code is a mandatory field in the XDS specification and therefore required by the PCEHR. However, there is no PCEHR functionality that is based on the value of this field. As a workaround for this release of the PCEHR, discharge summary producing systems that are not easily able to map from their clinical specialty to the ANZIC code list should pick a fixed value to put in the document metadata, based on the general nature of the health service represented by the discharge summary producing system.

The following ANZIC codes appear to be probable candidates:

- ANZSIC 8401-6 Hospital (except psychiatric or veterinary hospitals)
- ANZSIC 8599-4 Community Health Facility
- ANZSIC 7561 General Health Administration

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