Context Management Specification Subject Data Definitions

Health Level Seven Standard

Context Management ("CCOW") Specification
Subject Data Definitions
Version CM-1.1

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1 Contents

1 INTRODUCTION .......................................................................................................................... 9
  1.1 CONTEXT MANAGEMENT DOCUMENT OVERVIEW ................................................................. 9
  1.2 CONTEXT DATA SUBJECT ....................................................................................................... 11
  1.3 CUSTOM SUBJECT AND ITEM NAMING CONVENTION ........................................................... 11
  1.4 CONTEXT DATA ITEM FORMAT .............................................................................................. 13
  1.5 CASE SENSITIVITY .................................................................................................................. 14
  1.6 ITEM NAMES, MEANING, SEMANTIC CONSTRAINTS, AND DATE TYPES ............................... 14
  1.7 LOCALIZATION ...................................................................................................................... 14
  1.8 REQUIRED ITEMS ................................................................................................................ 14
  1.9 IMPLICATIONS OF THE USE OF CUSTOM SUBJECTS AND ITEMS ..................................... 14

2 PATIENT SUBJECT ....................................................................................................................... 17
  2.1 SECURITY .............................................................................................................................. 17
  2.2 PATIENT SUBJECT DEPENDENCIES .................................................................................... 17
  2.3 SHARING PATIENT CONTEXT AT A SITE .............................................................................. 17
  2.4 STANDARD PATIENT CONTEXT DATA ITEMS ..................................................................... 17
  2.5 EXAMPLES OF PATIENT SUBJECT ITEMS .......................................................................... 20

3 ENCOUNTER SUBJECT ................................................................................................................. 21
  3.1 SECURITY .............................................................................................................................. 21
  3.2 ENCOUNTER SUBJECT DEPENDENCIES ............................................................................... 21
  3.3 SHARING ENCOUNTER CONTEXT AT A SITE ....................................................................... 21
  3.4 STANDARD ENCOUNTER CONTEXT DATA ITEMS .............................................................. 22
  3.5 EXAMPLES OF ENCOUNTER SUBJECT ITEMS .................................................................... 24

4 USER SUBJECT ............................................................................................................................ 25
  4.1 SECURITY .............................................................................................................................. 25
  4.2 USER SUBJECT DEPENDENCIES .......................................................................................... 25
  4.3 SHARING USER CONTEXT AT A SITE ................................................................................... 25
  4.4 STANDARD USER CONTEXT DATA ITEMS .......................................................................... 26
  4.5 EXAMPLES OF USER SUBJECT ITEMS .................................................................................. 27

5 CUSTOM SUBJECTS ...................................................................................................................... 29
  5.1 SECURITY .............................................................................................................................. 29
  5.2 CUSTOM SUBJECT DEPENDENCIES ..................................................................................... 29
  5.3 SHARING CUSTOM CONTEXT AT A SITE ............................................................................. 29
  5.4 EXAMPLE OF A CUSTOM SUBJECT ...................................................................................... 30

6 HL7 DATA TYPE REFERENCE ...................................................................................................... 31
  IS - coded value for user-defined tables ....................................................................................... 31
  ST - string data .......................................................................................................................... 31
  XPN - person name .................................................................................................................... 31
<table>
<thead>
<tr>
<th></th>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DLN</td>
<td>driver's license number</td>
</tr>
<tr>
<td>2</td>
<td>DT</td>
<td>date</td>
</tr>
<tr>
<td>3</td>
<td>TS</td>
<td>time stamp</td>
</tr>
</tbody>
</table>
Preface

This document was prepared by Mark Stega, Quantitative Solutions Inc. and Kyle Marchant, 3M Health Information Systems on behalf of Health Level Seven’s CCOW Technical Committee. Comments about the organization or wording of the document should be directed to the authors (MarkSteg@BellAtlantic.Net, krmarchant@mmm.com). Comments about technical content should be directed to ccow@lists.hl7.org.
Changes from 1.0

The following changes have been made in creating Version 1.1 of this document:

• Combined the Version 1.0 specification documents for the Patient subject and for the User subject into a single document.

• Added specification for Encounter subject.

• Added specification for defining custom subjects.

• Clarified that the data type used to represent a patient’s name is XPN (not PN).

• Added additional commentary about the meaning of various context data items as represented in the HL7 2.3.1 Specification for healthcare data interchange via messaging.
1 Introduction

The goal of this document is to provide a specification of the standard context data items that are supported for all subjects in the HL7 Context Management Architecture (CMA) as well as custom subjects and items that are not defined explicitly in this version of the CMA.

This document is new for Revision 1.1 of the CMA specification. The sections regarding patient subject, user subject, and overall description of the document are essentially verbatim from the superceded Revision 1.0 CMA documents. The sections regarding the encounter subject, custom subject, and custom items are new.

1.1 Context Management Document Overview

It is beyond the scope of this document to provide all of the details that are needed in order to fully implement conformant CMA applications and components. The necessary additional details are covered in a series of companion specification documents. These documents are organized to facilitate the process of defining additional link subjects and to accelerate the process of realizing the CMA using any one of a variety of technologies:

- There is an HL7 context management specification document defining the overall process and specification of context management. It does so in a subject and technology neutral fashion. Concurrent with the publication of this document, the following document has been developed:

  Health Level-Seven Standard Context Management Specification,
  Technology- And Subject- Independent Component Architecture, Version CM-1.1

- There is an HL7 context management user interface specification document for each of the user interface technologies with which CMA-enabled applications can be implemented. Each document reflects the user interface requirements established in this document in terms of a technology-specific look-and-feel. Concurrent with the publication of this document, the following document has been developed:

  Health Level-Seven Standard Context Management Specification,
  User Interface: Microsoft Windows OS, Version CM-1.1

- There is an HL7 context management component technology mapping specification document for each of the component technologies. Each document provides the technology-specific details needed to implement CMA-compliant applications and the associated CMA components, as specified in this document. Concurrent with the publication of this document, the following document has been developed:

  Health Level-Seven Standard Context Management Specification,
  Component Technology Mapping: ActiveX, Version CM-1.1
Finally, the context management subjects and technologies that are of interest are determined by the HL7 constituency. There is an HL7 context management data definition specification document for the defined link subjects. The document defines the data elements that comprise a link subject. This is the current document that you are reading:

Health Level-Seven Standard Context Management Specification, Subject Data Definition, Version CM-1.1

The organization of this set of documents is illustrated in Figure 1.

Figure 1: Organization of HL7 Context Management Specification Documents
1.2 Context Data Subject

Context data is grouped by subject. Each subject represents a real-world entity or concept. Each subject is described by a set of context data items. Each context data item is structured as a name/value pair. The allowed name and data type are defined for each context data item. This document specifies the three standard HL7 context subjects, “Patient”, “User”, and “Encounter”, as well as a framework for custom subjects. It also specifies a revised schema for support of custom items.

1.3 Custom Subject and Item Naming Convention

Standard context subjects and items are specified by HL7. Custom subjects and items are not defined by HL7, but may co-exist in systems that employ the standard subjects and items. The intent is to allow specification of completely new subjects and additional data items by an organization, partnership or consortium. See Section 1.9 for some implications of the use of custom items and subjects.

In order to accommodate this use of the CMA while protecting applications that may not know (or care to know) about these custom subjects and/or items, a mandatory naming convention is specified. The general scheme of the convention is the addition of the meta-descriptor as a prefix to the subject or item name.

This unique identification of this descriptor shall be formed using the organization’s World Wide Web Consortium (W3C) domain name. In the case of custom subjects and/or items defined by more than one organization, it is up to the group of organizations to use one of the member’s W3C domain name or to create a new registered W3C domain name.

An example of a custom subject, shown as having been defined by 3M Health Information Systems, is:

[mmm.com]DateRange

An example of an item within a custom subject is:

[mmm.com]DateRange.id.[mmm.com]StartDate

An example of a custom item within the standard patient subject, shown as having been defined by GE/Marquette Medical Systems, is:

Patient.Co.[mei.com]Current_medications

For consistency, standard subject and item names are conceptually represented as using the descriptor [hl7.org], for example:

[hl7.org]Patient

The descriptor [hl7.org] shall not be used by an organization other than Health Level Seven. It can be assumed that Health Level Seven will not define custom items or custom subjects.
The descriptor may be omitted when the desired descriptor can be inferred from the following rules:

1. The default descriptor is [hl7.org].
2. The subject descriptor shall serve as the descriptor for all items within the subject unless an item name contains a descriptor different from the one used with the item’s subject name.
3. The context manager shall omit descriptors, including [hl7.org], from the subject name and/or item names of any items it returns to its clients whenever the descriptor can be inferred. This rule supports backwards compatibility with applications designed prior to Version 1.1 of the HL7 Context Management Specification. For example, a client will never see the descriptor [hl7.org] when it accesses the list of item names for the current context from the context manager.
4. A context participant may optionally use descriptors when accessing the context data even when the descriptor could otherwise be inferred.

The following examples illustrate these rules. These examples are somewhat contrived for the purpose of illustrating the rules and do not necessarily represent real-world practices.

The following is not a valid context item name:

```
[mrr.com]DateRange.co.[hl7.org]StartDate
```

The following are equivalent context item names for a standard subject:

```
[hl7.org]Patient.co.[hl7.org]Name
[hl7.org]Patient.co.Name
Patient.co.[hl7.org]Name
Patient.co.Name
```

The following are equivalent context item names for a custom subject:

```
[mrr.com]DateRange.id.[mrr.com]StartDate
[mrr.com]DateRange.id.StartDate
```

The following denote different context items names. The first represents a standard item for a standard subject. The second represents an item in a custom subject. The third represents a custom item in a standard subject:

```
Encounter.co.AdmitDate
[mrr.com]Encounter.co.AdmitDate
Encounter.co.[mrr.com]AdmitDate
```

An organization may define custom items for a custom subject defined by another organization.

The following examples denote three different items for the same custom subject:

```
[mrr.com]DateRange.id.[mrr.com]StartDate
[mrr.com]DateRange.id.[sentillion.com]EndDate
[mrr.com]DateRange.id.[sentillion.com]StartDate
```
Note that the item `[mmm.com]DateRange.id.[sentillion.com]StartDate` is **not** the same as `[mmm.com]DateRange.id.[mmm.com]StartDate.

### 1.4 Context Data Item Format

The general format of a context data item name is:

```
Subject_label.role.Name_prefix.optional_name_suffix
```

*Subject_label* is the name of the subject to which the item belongs.

*Role* indicates the role of the item, as follows:

- `Id` = standard identifier data, which is used to identify a real-world entity or concept.
- `Co` = standard corroborating data, which is used by applications and/or users to corroborate the identity of a real-world entity or concept.

*Name_prefix* is the name of the item within the context of its subject.

- `Optional_name_suffix` is optional for data items. Its purpose is to enable multiple items to represent the same logical concept. For example, at a particular site, patients may be identified by multiple medical record numbers. Each item that represents a patient medical record number would have the same item subject label, role, and item name prefix. However, each item name would have a different site-defined item name suffix. An example using the medical record number and two sites would be `Patient.Id.MRN.SaintElsewhereInpatient` and `Patient.Id.MRN.SaintElsewhereCommunityClinic`

The formal syntax for an item expressed in BNF format is:

```
<Item> : <Subject>"."<Role>"."<ItemName>"."<OptionalSuffix>

<ItemName> : <"W3Cname"><Name>

<OptionalSuffix> : <Name>
```

---

1 In previous versions of this specification, an additional role of `ZZ` was defined and used to indicate non-standard organizationally defined data. This role is now deprecated, with the functionality being implemented through the custom subjects and custom items.
1.5 Case Sensitivity

Item names and item values whose data type is a character string shall be treated as “case insensitive” unless specifically noted otherwise. This means that context participants and context management components shall not rely on the case of a case insensitive context item name or value when applying decision or comparison logic.

1.6 Item Names, Meaning, Semantic Constraints, and Data Types

Where applicable, the HL7 Version 2.3.1 Specification for healthcare data interchange via messaging is used as the basis for context data item names, meaning, semantic constraints and value data type. The relevant portions of the HL7 Version 2.3.1 Specification are cited as part of the context subject data definitions that appear later in this document.

1.7 Localization

Context data item names shall be represented in English, regardless of the country and/or locale that a context participant or context management component is being used in. This is because context data item names are generally not seen by users of context-enabled applications. In contrast, context data item values, which generally are seen by users of context-enabled applications, shall be represented in the appropriate local language.

1.8 Required Items

Every context change transaction requires that the value for at least one identifier (Id) item is set by the application that instigated the transaction.

1.9 Implications Of The Use Of Custom Subjects And Items

Allowing the definition of custom items and subjects is necessary for maximizing the utility of the Context Management Standard. However, there are interoperability implications for vendors and users when applications that employ custom subjects and/or items are deployed.

In the absence of custom subjects and items, context-enabled applications are truly ‘plug and play’ when they correctly implement the Context Management Standard. In the worst case, certain applications may not support all of the standard context subjects, but will nevertheless...
interoperate properly using the subjects it does support. For example, an application might be 
User Link-enabled and Patient Link-enabled, but might not be Encounter Link-enabled.

With the introduction of custom subjects, the potential exists for interoperability conflicts as the 
Context Management Standard evolves. The problem arises when an organization defines a 
custom context subject and a similar subject is subsequently standardized. Prior to the standard, 
the applications that supported the custom subject worked together to offer the user an enhanced 
context sharing capabilities. Subsequent to the standardization of the subject these application will 
still interoperate with each other, but will not interoperate with applications that support the newly 
standardized subject.

Similar situations may arise with custom items. However, a custom item elaborates an existing 
subject, whereas a custom subject defines an entirely new context concept. The risk of not 
interoperating is greater due to custom subjects than it is due to custom items.

The primary means for avoiding, or at least minimizing, compatibility issues due to custom 
subjects and/or items is for organizations to provide migration paths for their applications. A new 
release of the application can be provided when a previously custom subject or item is superceded 
by a standard definition for a similar subject or item. Alternatively, the organization can enable its 
applications such that they are configurable in the field. This would allow reconfiguration of the 
custom subject or item name with the standard name. Yet another approach is to implement a 
mapping agent-like application that maps a custom subject and/or item to the appropriate standard 
subject or item.

In general, the best use of a custom subject or item is for prototyping and demonstrating a context 
concept that could then be subsequently standardized for use among the entire HL7 community. 
The next best use is by a single organization that is creating an integrated suite of components 
with proprietary context-sharing capabilities and is therefore unlikely to be standardized

It is recommended that the use of custom subjects and items be pursued with caution. It is further 
recommended that when custom context content is necessary, that custom items for standard 
subjects are used in lieu of custom subjects. In doing so, the risk of encountering interoperability 
problems is at least reduced.
2 Patient Subject

The patient subject identifies a real world patient. A patient is a person who is subject to receive, is receiving, or has received healthcare services.

The subject label for the patient subject is “Patient”.

2.1 Security

The patient subject is not a secured subject. Any application may set or get the patient context.

2.2 Patient Subject Dependencies

The patient subject is not dependent upon any other subject.

2.3 Sharing Patient Context At a Site

A particular real world patient may be identified at a site using one of several identifiers. Further, some of these identifiers may represent the same conceptual concept, but may nevertheless have different values for different applications. For example, various applications may use the concept of a medical record number as the means for identifying patients, but may nevertheless employ different medical record number values to represent the same people.

Therefore, in the specification of the patient subject certain context subject identifier items (see Section 2.4) may be differentiated by a site-defined suffix. A Patient Link-enabled application shall be configurable such that it can be configured on-site as to which suffix (or suffices) it is to use when it interacts with the context manager to set or get patient context data. This suffix may be the name of a locale, facility, application, or other sensible identifier, such that the “context” for interpreting the patient context data can be readily represented.

2.4 Standard Patient Context Data Items

The standard context data items for the patient subject are specified below.
<table>
<thead>
<tr>
<th><strong>Patient Subject Identifier Item Name</strong></th>
<th><strong>HL7 Meaning</strong></th>
<th><strong>HL7 Data Type</strong></th>
<th><strong>HL7 Semantic Constraints on Values</strong></th>
<th><strong>Case Sensitive</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient.Id.MRN.Suffix</td>
<td>Patient’s medical record number, per PID-2</td>
<td>ST</td>
<td>HL7 Table 0203 Identifier Type = MR</td>
<td>No</td>
</tr>
<tr>
<td>Patient.Id.MPI</td>
<td>Patient’s identifier in the “Master Patient Index”, per PID-2</td>
<td>ST</td>
<td>HL7 Table 0203 Identifier Type = PT or PI (as agreed upon by context sharing systems) and Assigning Authority represents the MPI system</td>
<td>No</td>
</tr>
<tr>
<td>Patient.Id.NationalIdNumber</td>
<td>Patient’s national identifier number, per PID-2</td>
<td>ST</td>
<td>HL7 Table 0203 Identifier Type = PT and Assigning Authority represents agreed upon National Authority</td>
<td>No</td>
</tr>
<tr>
<td>Patient.Id.Alternate.Suffix</td>
<td>Alternate patient identifier, per PID-2, PID-3, PID-4, or PID-18 as agreed to by context sharing systems</td>
<td>ST</td>
<td>HL7 Table 0203 Identifier Type not = DL or SS</td>
<td>No</td>
</tr>
</tbody>
</table>

1. An application shall set a value for at least one of items defined above whenever it sets the patient context.
### Patient Subject Corroborating Item

<table>
<thead>
<tr>
<th>Name</th>
<th>HL7 Meaning</th>
<th>HL7 Data Type</th>
<th>HL7 Semantic Constraints on Values</th>
<th>Case Sensitive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient.Co.PatientName</td>
<td>Patient’s legal name, per PID-5</td>
<td>XPN</td>
<td>Table 0200</td>
<td>No</td>
</tr>
<tr>
<td>Patient.Co.AliasName</td>
<td>Alias name for the patient, per PID-9</td>
<td>XPN</td>
<td>Table 0200</td>
<td>No</td>
</tr>
<tr>
<td>Patient.Co.DateTimeOfBirth</td>
<td>Patient’s Date and time of birth, per PID-7</td>
<td>TS</td>
<td>None</td>
<td>No</td>
</tr>
<tr>
<td>Patient.Co.Sex</td>
<td>Patient’s gender, per PID-8</td>
<td>IS</td>
<td>Table 0001</td>
<td>No</td>
</tr>
<tr>
<td>Patient.Co.DLN</td>
<td>Patient’s driver’s license number, per PID-20</td>
<td>DLN</td>
<td>None</td>
<td>No</td>
</tr>
<tr>
<td>Patient.Co.SSN</td>
<td>Patient’s Social Security Number, per PID-19</td>
<td>ST</td>
<td>None</td>
<td>No</td>
</tr>
</tbody>
</table>

An application may optionally set a value for items defined above when it sets the patient context.
### 2.5 Examples of Patient Subject Items

Below are examples of patient subject items:

<table>
<thead>
<tr>
<th>Example Item Names</th>
<th>Example Item Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient.Id.MPI</td>
<td>001KM002130-JJXXX-98</td>
</tr>
<tr>
<td>Patient.Id.MRN.St_Elsewhere_Clinic</td>
<td>SEC-KMAR-00hjd7792</td>
</tr>
<tr>
<td>Patient.Id.MRN.St_Somewhere_Clinic</td>
<td>SSC-KMAR-00WSB887455</td>
</tr>
<tr>
<td>Patient.Co.DateTimeOfBirth</td>
<td>19580317</td>
</tr>
<tr>
<td>Patient.Co.PatientsName</td>
<td>Marchant^Kyle^^^</td>
</tr>
</tbody>
</table>
3 Encounter Subject

The encounter subject identifies a real world patient encounter. A patient encounter is an interaction between a patient and healthcare participant(s) for the purpose of providing patient service(s) or assessing the health status of a patient. For example, outpatient visit to multiple departments, home health support (including physical therapy), inpatient hospital stay, emergency room visit, field visit (e.g., traffic accident), office visit, occupational therapy, telephone call.

The item subject label for the encounter subject is “Encounter”.

A single patient may have many encounters within a healthcare enterprise. (The exact definition of encounter varies among institutions.) For example, one encounter could be for an acute care or inpatient visit, while another might be for an outpatient check-up such as a doctor’s office follow-up visit. A patient may have more than one encounter on the same day.

3.1 Security

The encounter subject is not a secured subject. Any application may set or get the encounter context.

3.2 Encounter Subject Dependencies

Since an encounter is something that a patient experiences, the encounter context is dependent upon the patient context. As such, the encounter context and the patient context must represent the same real world person. The encounter context is dependent upon the patient context as follows:

1. Whenever an application sets the encounter context then it shall also set the patient context to represent the same real world person as represented by the encounter context.

2. An application may set a patient context and not set the encounter context. The context manager shall not post-fill the encounter context with the value that it had prior to the transaction, but shall instead set the encounter context to empty.

3. An Encounter Link-enabled application that understands the current patient context but does not understand the encounter context shall clearly indicate this fact to the user.

3.3 Sharing Encounter Context at a Site

Individual applications generally have different methods for creating an identifier for an encounter. Some combine the values of multiple identifiers extracted from other application data in order to create a unique encounter identifier. For example, some applications use the combination of Medical Record Number (PID-2) and Account Number (PID-18) to identify an encounter.
To compound this situation, different applications may have different concepts about what encounter means. A financial application may only have a concept of an encounter being a patient account, while a clinical application may have a more granular concept of a patient visit. The current HL7 Patient Administration specification (i.e., Chapter 3 of the HL7 2.3.1 Specification) uses a visit indicator on the PV1 message segment (PV1-51) to distinguish whether the “visit” being communicated refers to an account level or visit level information.

Finally, it is also possible for different applications to use the same identifier value to represent different real-world patient encounters. For example, two applications may coincidentally use the same visit number to represent two different encounters by the same patient.

Therefore, in the specification of the encounter subject all context subject items (see Section 3.4) may differentiated by a site-defined suffix. An Encounter Link-enabled application shall be configurable such that it can be configured on-site as to which suffix (or suffices) it is to use when it interacts with the context manager to set or get encounter context data. This suffix may be the name of a locale, facility, application, or other sensible identifier, such that the “context” for interpreting the encounter context data can be readily represented.

### 3.4 Standard Encounter Context Data Items

The standard context data items for the encounter subject are specified below.

<table>
<thead>
<tr>
<th>Encounter Subject Identifier Item Name</th>
<th>HL7 Meaning</th>
<th>HL7 Data Type</th>
<th>HL7 Semantic Constraints on Values</th>
<th>Case Sensitive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encounter.Id.VisitNumber.Suffix</td>
<td>Visit Number, per PV1-19</td>
<td>ST</td>
<td>HL7 Table 0203 Identifier Type = VN</td>
<td>No</td>
</tr>
<tr>
<td>Encounter.Id.AlternateVisitId.Suffix</td>
<td>Alternate Visit Id, per PV1-50</td>
<td>ST</td>
<td>HL7 Table 0203 Identifier Type = VN</td>
<td>No</td>
</tr>
<tr>
<td>Encounter.Id.AccountNumber.Suffix</td>
<td>Account Number, per PID-18</td>
<td>ST</td>
<td>HL7 Table 0203 Identifier Type = AN</td>
<td>No</td>
</tr>
</tbody>
</table>

An application shall set a value for at least one of the items defined above whenever it sets the encounter context.
<table>
<thead>
<tr>
<th>Encounter Subject Corroborating Item Name</th>
<th>HL7 Meaning</th>
<th>HL7 Data Type</th>
<th>HL7 Semantic Constraints on Values</th>
<th>Case Sensitive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encounter.Co.VisitIndicator. Suffix</td>
<td>Visit indicator, per PV1-51</td>
<td>IS</td>
<td>HL7 Table 0326</td>
<td>No</td>
</tr>
<tr>
<td>Encounter.Co.AdmitDateTime. Suffix</td>
<td>Admission date/time, per PV1-44</td>
<td>TS</td>
<td>None</td>
<td>No</td>
</tr>
<tr>
<td>Encounter.Co.DischargeDateTime. Suffix</td>
<td>Discharge Date/Time, per PV1-45</td>
<td>TS</td>
<td>None</td>
<td>No</td>
</tr>
<tr>
<td>Encounter.Co.PatientClass. Suffix</td>
<td>Patient class, per PV1-2</td>
<td>IS</td>
<td>HL7 Table 0004</td>
<td>No</td>
</tr>
<tr>
<td>Encounter.Co.AdmissionType. Suffix</td>
<td>Admission type, per PV1-4</td>
<td>IS</td>
<td>HL7 Table 0007</td>
<td>No</td>
</tr>
<tr>
<td>Encounter.Co.AssignedPatientLocation. Suffix</td>
<td>Patient’s current location, per PV1-3</td>
<td>PL</td>
<td>None</td>
<td>No</td>
</tr>
<tr>
<td>Encounter.Co.ServicingFacility. Suffix</td>
<td>Servicing facility, per PV1-39</td>
<td>PL</td>
<td>HL7 Table 115 This field is used in a multiple facility environment to indicate the facility with which this visit is associated.</td>
<td>No</td>
</tr>
<tr>
<td>Encounter.Co.PatientType. Suffix</td>
<td>Type of patient, per PV1-18</td>
<td>IS</td>
<td>HL7 Table 0018</td>
<td>No</td>
</tr>
</tbody>
</table>

An application may optionally set a value for items defined above when it sets the encounter context. It is highly recommended that the application also explicitly set the corroborating Visit Indicator item to ensure other applications know the type of encounter context being shared.
3.5 *Examples of Encounter Subject Items*

Below are examples of encounter subject items:

<table>
<thead>
<tr>
<th>Example Item Names</th>
<th>Example Item Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encounter.Id.VisitNumber</td>
<td>11111A</td>
</tr>
<tr>
<td>Encounter.Co.AdmitDateTime</td>
<td>19990515</td>
</tr>
<tr>
<td>Encounter.Co.DischargeDateTime</td>
<td>19990516</td>
</tr>
</tbody>
</table>
4 User Subject

The user subject identifies a real world application user. A user is a person who has the capability to operate an application and in so doing is represented to the application via an account defined specifically for the user and/or defined for the functional role of the user as denoted by an application-specific classification of user roles.

The item subject label for the user subject is “User”.

4.1 Security

The user subject is a secured subject. Only designated applications may set the user context.

4.2 User Subject Dependencies

The user subject is not dependent upon any other subject.

4.3 Sharing User Context At a Site

A particular real world user may be identified at a site using a different logon name for each application.

Therefore, in the specification of the user subject certain context subject identifier items (see Section 4.4) may be differentiated by a site-defined suffix. A User Link-enabled application shall be configurable such that it can be configured on-site as to which suffix (or suffices) it is to use when it interacts with the context manager to set or get user context data. This suffix may be the name of a locale, facility, application, or other sensible identifier, such that the “context” for interpreting the user context data can be readily represented.
4.4 Standard User Context Data Items

The standard context data items for the user subject are specified below.

<table>
<thead>
<tr>
<th>User Subject Identifier Item Name</th>
<th>HL7 Meaning</th>
<th>HL7 Data Type</th>
<th>HL7 Semantic Constraints on Values</th>
<th>Case Sensitive</th>
</tr>
</thead>
<tbody>
<tr>
<td>User.Id.Logon.Suffix</td>
<td>User’s logon name (No meaning for HL7)</td>
<td>ST</td>
<td>None</td>
<td>Value is case sensitive. For example, “ksmith” and “Ksmith” are two different logon id values.</td>
</tr>
</tbody>
</table>

An application shall set a value for the item defined above whenever it sets the user context.

<table>
<thead>
<tr>
<th>User Subject Corroborating Item Name</th>
<th>HL7 Meaning</th>
<th>HL7 Data Type</th>
<th>HL7 Semantic constraints on values</th>
<th>Case Sensitive</th>
</tr>
</thead>
<tbody>
<tr>
<td>User.Co.Name</td>
<td>User’s name (No meaning for HL7)</td>
<td>XPN</td>
<td>None</td>
<td>No</td>
</tr>
</tbody>
</table>

An application may optionally set a value for items defined above when it sets the user context.
4.5 Examples of User Subject Items

Below are examples of user subject items:

<table>
<thead>
<tr>
<th>Example Item Names</th>
<th>Example Item Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>User.Id.Logon.3M_Clinical_Workstation</td>
<td>k_marchant</td>
</tr>
<tr>
<td>User.Id.Logon.Logician</td>
<td>kylem</td>
</tr>
<tr>
<td>User.Id.Logon.Carevue</td>
<td>KM01230</td>
</tr>
<tr>
<td>User.Co.Name</td>
<td>Kyle Marchant</td>
</tr>
</tbody>
</table>
5 Custom Subjects

The item subject label and item names for a custom subject are defined per Sections 1.3 and 1.4. The available roles are Id and Co. It is at the discretion of the defining entity (provider institution, vendor, or consortium) to define the required name descriptors and any optional name suffixes for a particular custom subject.

5.1 Security

The specification for a custom subject must indicate whether or not the subject is secured. Any application may set or get non-secured custom subject. Only designated application may set a secured custom subject.

5.2 Custom Subject Dependencies

A custom subject may be dependent upon another standard or custom subject. However, a custom subject shall not require that a standard subject, or a custom subject defined by another organization, be dependent upon it.

5.3 Sharing Custom Context At a Site

A custom subject may identify a real world object or concept that has multiple synonymous identifiers. Therefore, in the specification of a custom subject the names of the identifier items for a custom subject may be differentiated by a site-defined suffix.

An application enabled to support a particular custom subject shall be configurable such that it can be configured on-site as to which suffix (or suffices) it is to use when it interacts with the context manager to set or get context data for the custom subject. This suffix may be the name of a locale, facility, application, or other sensible identifier, such that the “context” for interpreting the custom context data can be readily represented.
5.4 Example of a Custom Subject

Below is an example of a custom subject with several items. In this example the W3C name for 3M is used as the subject qualifier, and a hypothetical Payer subject is defined. Note that a declaration is required by the defining organization for each item as to its meaning, data type, case sensitivity, and security. Optionally, examples may be given to clarify meaning.

<table>
<thead>
<tr>
<th>Example Item Names</th>
<th>HL7 Meaning</th>
<th>HL7 Data Type</th>
<th>HL7 Semantic Constraints on Values</th>
<th>Case Sensitive</th>
<th>Example Item Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>[mmm.com]Payer.Id</td>
<td>Payer identifier</td>
<td>ST</td>
<td>Must be a valid payer id</td>
<td>No</td>
<td>234-56-7890</td>
</tr>
<tr>
<td>[mmm.com]Payer.Co.Name</td>
<td>Payer’s name</td>
<td>ST</td>
<td>None</td>
<td>No</td>
<td>HMO Blue</td>
</tr>
</tbody>
</table>

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6 HL7 Data Type Reference

The item data types referenced in this document are the same as those specified in the HL7 Version 2.3.1 Specification, Section 2.8, as described below:

<table>
<thead>
<tr>
<th>DATA TYPE</th>
<th>DATA TYPE NAME</th>
<th>HL7 Section Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>ID</td>
<td>Code Value for HL7-Defined Table</td>
<td>2.8.21</td>
</tr>
<tr>
<td>IS</td>
<td>Coded Value For User Defined Table</td>
<td>2.8.22</td>
</tr>
<tr>
<td>ST</td>
<td>String</td>
<td>2.8.40</td>
</tr>
<tr>
<td>XPN</td>
<td>Person Name</td>
<td>2.8.29</td>
</tr>
<tr>
<td>DLN</td>
<td>Drivers License Number</td>
<td>2.8.13</td>
</tr>
<tr>
<td>DT</td>
<td>Date</td>
<td>2.8.15</td>
</tr>
<tr>
<td>TS</td>
<td>Time Stamp</td>
<td>2.8.44</td>
</tr>
</tbody>
</table>

The formatting information for each of these fields is specified below, with its corresponding description and HL7 specification section identifier. Only the encoding characters and escape sequences indicated below shall be used:

**ID** – a string drawn from an HL7-defined table of legal values

**IS** – a string drawn from a user-defined table of legal values

**ST** – a character string, not including special HL7 characters such as ^ or &

**XPN - person name**

Components: `<family name (ST)> & <family name prefix (ST)> ^ <given name (ST)> ^ <middle initial or name (ST)> ^ <suffix (e.g., JR or III) (ST)> ^ <prefix (e.g., DR) (ST)> ^ <degree (e.g., MD) (IS)> ^ <name type code (ID)> ^ <name representation code (ID)>`

Example: Smith^John^J^III^DR^PHD^L
DLN - driver’s license number

Components: <license number (ST)> ^ <issuing state, province, country (IS)> ^ <expiration date (DT)>

DT - date

Format: YYYY[MM][DD]

Example: 19880704

TS - time stamp

Format:

YYYY[MM][DD][HH][MM][SS][.S[S[S[S][S]]]][+-ZZZZ][^<degree of precision>]

Example: 19760704010159-0500