HL7 OID Registry

Introduction And Overview
The HL7 OID Registry

- What is the HL7 OID Registry?
- How Do I Use the HL7 OID Registry?
  - Finding an OID
  - Register an OID
  - Purchasing OID Coupons
- What Data Do I Need To Enter?
  - Information You Need Up Front
  - Decisions You Will Need To Make Before You Begin
- What If The Entry Has Errors?
  - Edit Entered Data of a Registered OID
- What if the OID Key is Lost?

Click on any blue box to jump directly to that section
HL7 OID Registry: Introduction

A database of registered object identifiers used to identify:

- Communicating organizations such as those using ONC MU Guides
- Code Systems and Value Sets cited in HL7 Standards
- Other kinds of things of interest to the HL7 community

Usable by anyone

Web page front directly accessible from the HL7 Home Page

Can also create a new OID for you upon request during the registration process
What are OIDs? Why Do I Need Them?

- OIDs are machine-readable globally unique identifiers for various objects
- They are listed in registries which maintain descriptive information about them
- The ONC Meaningful Use regulations specify Implementation Guides that require OIDs
  - For organizations doing messaging
  - For code systems and identifier systems required in the Implementation Guides
  - To pass certification, organizations often must procure one or more OIDs to use in their interfaces
OIDs and Registries

- OIDs are assigned by ISO Registration Authorities (HL7 is one)
- There are many OID Registries in the world
  - Some public, some private, some free, some not
- There is an ISO Standard for the metadata for OIDs in Registries
- HL7 maintains an OID Registry for Healthcare Information Technology uses
- HL7 charges $500 to register an OID in its registry
  - May include creating one
The HL7 OID Registry

- Houses several thousand OIDs that are cited in various published HL7 Standards
- Use of the registry to look up OIDs and their information (metadata) is free for anyone
  - Browser based through the internet
- OIDs can be registered by anyone who already has an OID in hand
- If an OID is needed and not currently in hand, the HL7 OID Registry can create one for you during the registration process
Where is the HL7 OID Registry?

Use any browser

Go to the HL7 Home Page at www.hl7.org

The link to OID Registry is here

Click on it to go to the OID Registry main page
OID Registry Main Page

This is the entry page

Everything you wish to do with HL7 OIDs is done by clicking links on this page
Finding an OID in the Registry

- This section allows you to lookup an OID.
- You can filter by the Status of the OID entry by selecting the appropriate Status from the dropdown menu.
- All of the little question mark boxes bring up a piece of explanatory text when you click on them.
- You can search by the OID value, or the Symbolic Name, the Description, or the Full Name.
- Some searches do an exact string match, and some look for any instance of the string entered; click on the help mark.
- Click on Find OID to perform the search.
Finding an OID in the Registry

- Note that a yellow help text box will be displayed as soon as you click into any field to enter the text.
- If you click on the ‘X’ in the upper right corner of the yellow box, the box will disappear.
- When you have entered your searching and filtering criteria, click on ‘Find OID’ at the bottom of this section and the search results will be displayed in the pane on the right side.
- Note that at this time you cannot search by organization or submitter or contact person or email addresses.

This is the secondary identifier, short name, or 'title' for the OID.
Search Results Display

Click on an entry to bring up the details display screen.
Page Shows all OID Information

- The right-hand side pane shows all of the metadata fields for the OID entry.
- The data is grouped into sections for Submitter, Contact, Responsible Body, and General Information.
- It indicates if the OID is “Internal” (created using the OID Registry web interface) or “External” (value is entered manually during registration).
- Submitter and Internal/External cannot be changed.
Go Back to Main Screen

Click on the HL7 logo

Or on the Home link

<table>
<thead>
<tr>
<th>OID Excel Reports</th>
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<tbody>
<tr>
<td>All OIDs</td>
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<tr>
<td>External Coding System OIDs</td>
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<tr>
<td>Internal Coding System OIDs</td>
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<tr>
<td>Ad-Hoc Reporting</td>
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<table>
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<tr>
<th>Search for an OID</th>
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<tr>
<td>Status: Complete</td>
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<tr>
<td>OID:</td>
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<tr>
<td>Symbolic Name:</td>
</tr>
<tr>
<td>Description:</td>
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<tr>
<td>Full Name for Object:</td>
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<table>
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<tr>
<th>Edit My OID Data</th>
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<tbody>
<tr>
<td>Enter your OID:</td>
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<tr>
<td>Enter your OID Key:</td>
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<tr>
<td>Edit OID</td>
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<table>
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<tr>
<th>Email OID Keys</th>
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<tr>
<td>Enter your Email Address:</td>
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Get Lists of Registered OIDs

Introduction for the HL7 Object Identifier (OID) Registry

ISO Object Identifier (OID) Definition:

An OID is a globally unique ISO (International Organization for Standardization) identifier. There are multiple ways that this identifier may be represented, and HL7 has chosen to represent OID registered here and used in HL7 models using a form that consists only of numbers and dots (e.g., 2.16.640.1.113883.3.11). OIDs are paths in a tree structure, with the left-most number representing the root and the right-most number representing a leaf.

Each OID is created by a Registration Authority. Each of these authorities may, in turn, delegate assignment of new OIDs under it to other registration authorities that work under its auspices, and so on down the line. Eventually, one of these authorities assigns a unique (to it) number that corresponds to a leaf node on the tree. The leaf may represent a registration authority (in which case the OID identifies the authority), or an instance of an object. A registration authority owns the namespace consisting of its sub-tree.

OIDs are a preferred scheme for unique identifiers in HL7. OIDs should always be used except if one of the inclusion criteria for other schemes apply. HL7 Version 3 models use OIDs to identify coding schemes and identifier namespaces. OIDs can be allocated by any organization using a unique OID root. A single message can use OIDs from various sources and a single scheme can be identified by more than one OID (e.g., by an OID from more than one organization). Once issued, an OID is never withdrawn and always identifies the same scheme or object.

As with all identification systems there is not much point having identifiers if you don’t know what they represent and vice versa - hence identification systems generally require a registry. This HL7 OID registry serves that purpose for the HL7 community.

HL7-Assigned OIDs

HL7 has established this OID registry and assigns OIDs in its branch for HL7 users and vendors upon their request in its role as an ISO Registration Authority. HL7 also assigns OIDs to public identifier-assigning authorities both U.S. nationally (e.g., the U.S. State driver license bureaus, U.S. Social Security Administration, HIPAA Provider ID registry, etc.) and internationally (e.g., other countries.
Output Lists of OIDs

- All of the outputs are done the same way
- You may select which metadata fields you wish to be output with the OIDs
- The four different output reports just have a different set of metadata fields selected by default; you can change any of these for each output operation
- You may select either an excel file (.xls), a comma-separated-value file (.csv), or an XML file for the output format
Example Selecting External Code System OIDs

- The right-hand side pane shows the standard output filtering and metadata field selection checkboxes.
- The **OID Type** and **Status** are used in the same way. Searching for an OID is used: filter the OIDs to only output those that match this criteria.
- The **Columns** checkboxes allow selection for all of the metadata to be output for each OID. These are the only fields that may be output for each OID.
- The **Format** dropdown allows you to select CSV, Excel, or XML output.
- The **XSD for XML** link on the very bottom right allows download of the XSD schema for the XML output file (if selected for the output format).
Register and/or Get An OID

There are 2 links to get to the register screens. Clicking on either one will get you to the same registration page. If you do not have an OID in hand, you can request one during registration.

OIDs are not free!
Overall Process Steps

1. Login to your HL7 account
   - If you do not have one, you must create one
2. Purchase a coupon for an OID from the HL7 Store
3. Redeem the coupon that is emailed to you in order to commence the registration
4. Enter the fields of data that are maintained for OIDs in the registry
   - If you do not have an OID to enter, one can be created for you as part of this
5. Submit the registration
6. Receive OID and OID keys on screen and by email
7. Get approval confirmation email
HL7 Login and OID Coupons

- Making a purchase on the HL7 website requires an HL7 login
- If you do not have an HL7 login account, the screens that are part of the OID coupon purchase process require you to create an account
- If you do have an HL7 login account, you will be prompted to login
- If you are already logged in, you will not see the reminders to login to your account
Purchase an OID Registration

- **OIDs are not free!!!**
- **OIDs must** be purchased with a coupon
- This begins a ten-step process
- Once you have purchased a coupon, come back here and redeem it for an OID registration

Members: $250   Non-Members: $500

- **Purchase a coupon to create an OID**
  - The login screen will display. Existing users must login and new users must create a login
  - Once logged in, the purchase screen displays; enter quantity and complete the purchase

- **Redeem a coupon that has already been purchased**
  - You will be asked to enter your coupon code which you received in the email
Step One: Go Purchase a Coupon

- Click here to go to the purchase screens
- This will bring you to the HL7 Store
  - Click here to go to Step Two
- If already logged in, just go to the next slide

- Purchase a coupon to create an OID
  - The login screen will display. Existing users must login and new users must create a login
  - Once logged in, the purchase screen displays; enter quantity and complete the purchase

- Redeem a coupon that has already been purchased
  - You will be asked to enter your coupon code which you received in the email
But if you are already logged in...

- If already logged into your HL7 account, you will see this instead
- Click here to go to the purchase screens
- This will bring you directly to the purchase page

This will take you directly to the purchase page to add the coupon to your cart. Click on this box here to proceed to that slide.
Step Two: Login to your HL7 account

- No HL7 account? Then you must create one from here.
- You cannot make a purchase at HL7 without a login account; create one and come back to this step
- You will not see this step if you are already logged in
Step Three: Find the Coupon

- All of the HL7 products for sale are listed on this page.
- They are in alphabetical order.
- Scroll down to the “O”s to find the OID coupon.
- Or search by entering “OID” in the Search box and click on “Search”
Step Four: Go Purchase It

- Click on this

- Then Add to Cart on next screen
Step Four: Add it to your cart

- Then
- Add to Cart by clicking here
Step Five: Cart and Checkout

- Works the same as other e-commerce sites
- Adjust quantities if you need to register more than one OID
- Continue to checkout when done
Step Six: Buy the Coupon

- Either button will allow you to go to the payment screen.

- The payment screens work just the same as buying any other kind of product online, or any other kind of HL7 product (including conference registrations).
Step Seven: Receive Emails

- After the purchase is processed and validated, you will receive TWO emails:

  1. Confirmation of purchase in first email

  2. OID Coupon in body of second email

From: HQ@HL7.org (mailto:HQ@HL7.org)
Sent: Friday, September 09, 2016 12:10 PM
To: LindaJenkins@HL7.org
Subject: HL7.org Order Confirmation

Confirmation for Linda Jenkins: 0104150
Transaction Number: 38447
Charged to your MasterCard Credit Card with its number ending in: 4908

The following is a summary of your purchase:

- **Description**: 
- **Object Identifier (OID)**
- **Total**
- **Total Shipping/Portage**
- **Sales Tax**
- **Pst**
- **Balance due**

*Note: Memberships, OID’s and Subscriptions are non-refundable.*

- **Date**: 9/9/16 1:15 PM
- **Code**: OID_Coupon_code
- **Record**
- **From**: webmaster@HL7.org
- **To**: tk_cmrc@tklein.com
- **Subject**: Coupon(s) for OID registry purchase
- **Body**: Your Payment has been processed for OID coupon. Please use link below to redeem your coupon.

Step Eight: Redeem OID Coupon

Click on this hyperlink

Or paste the link into your browser if clicking it doesn’t work

Note that the OID coupon email sometimes winds up in your spam folder!

This is the actual numeric coupon code

http://hl7.org/oid/index.cfm?coupon_code=1375465764
Step Nine: Enter Coupon Code

- Will automatically fill in this number from the hyperlink
- If there is some problem, you can enter in the numeric code manually also
- Click on Submit to enter the code and access the OID registration page

- If the number is incorrect, or the coupon has already been used, you will get his error screen message
Step Ten: Register Your OID

This is the initial entry screen to get an OID; seeing this indicates that your coupon was accepted and processed successfully and you can begin.
Entering Data for Your OID

- An entry for an OID in the HL7 OID Registry has 32 pieces of user-entered data
  - This is compliant with the ISO 13582 Health informatics Communication model and XML interface specification for OID registries
- Some may be left blank, but 15 of these data items are mandatory and must be entered
- Entry fields have help text associated with them – click the red question marks
- Some of this information should be determined before you begin!
Things You Must Decide First

- Am I getting an OID from HL7, or am I registering an OID I already have or I have created myself?
  - No difference in fee
  - OIDs may only be created by ISO Registration Authorities; you cannot just make one up
  - The HL7 OID Registry will create a valid OID for you if you don’t have one already

- You will choose:
  - Internal OID: We create the OID for you with an algorithm
  - External OID: You have one already that you are registering, and will enter it manually

- Same data entry requirements
Information You Will Need At Hand

- **Contact Name, Phone, Email, Address**
  - Who should be contacted by anyone with a question about the OID or the object it identifies

- **Preferred Realm**
  - Most are Universal, but some OIDs are for particular nations

- **OID Type**
  - OIDs are classified into over a dozen different types to make it easier to find groups of them
  - The most important Types you may be registering are:
    - Type 3 Root as RA (and can create your own OIDs under this); this is used for an Organizational OID for Meaningful Use reporting
    - Type 6 Coding Systems
    - Type 9 Conformance Profiles
    - Type 13 Value Sets
Information You Will Need At Hand

- **Responsible Body**
  - This is the Organization that is responsible for the object (such as a coding system) that is being identified by the OID
  - There are various types of Responsible Bodies:
  - For Physician offices, this is the practice
    - May be a single practitioner
  - For Health Exchanges, this is the company that runs the exchange
  - For Hospitals, this is the Institution or Facility
  - For Coding Systems and Value Sets, this is the organization that is the steward or publisher of them
  - For Identifier Namespaces, this is the company or agency that assigns the numbers
Responsible Body Information Entry

Information You Need for Responsible Body

- Name
- Address
- Phone Number
- Email Address
- URL (if it has a website)
- OID (if the Organization has its own OID)
- There are checkboxes to override the required entries if the phone or address are not published

Type
- You select from the drop down list of types of Responsible Bodies
- Pick the best match
Additional Information You May Need

- **External OID SubType**
  - Enter data for this field *only* if you are building a ‘tree’ of OIDs
  - For registrations of a branch node in the tree to organize the structure, but is not to be used in messaging or reporting
  - Use this if you wish to identify what kind of OIDs are under it

- **V2.x Linkage**
  - If you are registering an OID for a local code system this field may be important
  - If the code system is to be used in Version 2.x messaging (ELR, Immunizations, Lab Results, etc.) you need this
  - This holds the Table 0396 mnemonic of the code system
  - If there is not one, you should request an entry from HL7 (no charge for table 0396 entries)
The Last of the Information Needed

- **Full Name of Object being identified by the OID**
  - The full name or title of the OID you are registering

- **Symbolic Name**
  - Short name, usually an abbreviation, and is a secondary identifier
  - Must comply with ISO rules (in the help drop-down box)
    - Must start with a lowercase letter
    - Only letters, numbers, and hyphens are permitted

- **Description**
  - Please enter a *meaningful* description of this OID and what it will be used for so others have an idea what you will used it for
  - This is the primary international documentation for this OID entry
  - Poor descriptions may lead to others calling you to clarify how it is used

- **Assigning/Registration Authority**
  - Name or OID of the Authority that assigned an external OID; leave blank for internal OIDs
A Note about ‘root’ OIDs

- Only ISO Registration Authorities may create OIDs
  - ISO rules must be followed
- When you get a Type 3 OID, HL7 will not create any OIDs ‘under’ the OID it gave you
- You may follow guidance to define your own OIDs under that ‘root’
  - They are not official until registered with HL7
  - You enter the value you created during registration
- Guidance whitepaper link:
OID Data Entry Part One

- Filled in from the first entry screen
- You cannot change the email here, this comes from your HL7 login account
- 2nd Submitter is optional
- Fields marked with * (asterisk) are required and cannot be left blank

Contact Information must be to a person or organization that is responsible for the object being identified by the OID. If the OID is to identify an organization (as per Meaningful Use reporting requirements) then this is the contact information for the organization itself. Person titles are optional, and address is optional.
OID Data Entry Part Two

- Usually the name of the business
- Can use any international format; country code should be entered
- If the address or phone are not published, check these boxes and then you can leave the fields blank

Here is where you indicate if you want HL7 to create an OID under its branch using its assignment algorithm, or you wish to enter the value of an OID you already have. Enter your own pre-existing OID value in this fill-in field if ‘External’
OID Data Entry Part Three

- Must select the OID type you determined that you need earlier
- These are left blank for most common registrations
- Please enter a meaningful description!
- External OID SubType described in the FAQ

When you are all done, click on Continue here
The Symbolic Name must comply with ISO Secondary OID Identifier rules:

- If you violate them, when you try to move your cursor out of the field, you get an error popup like this:
  - You must click on ‘Close’ to clear the error
- You must enter a valid symbolic name, then you can move to another data entry field
- When all done, save the record by clicking on ‘Continue’ at the bottom
After all data entry is complete, after you click on ‘Continue’, you see the registration confirmation page. This has your OID and your OID Key value. Please save these.
You Will Receive Confirmation Email

- A confirmation of the registration is sent by email.
- It is sent to the Submitter and the Contact Person email addresses.
- It contains the OID value and the OID Key, which are needed to edit any data that was entered incorrectly or changes later. Please save this email!
- It also contains all of the data entered in every field (in XML format). Please review this for accuracy.
- Each entry is manually reviewed and approved within a few days. If there are problems, the Contact Person and/or Submitter will be emailed.

```xml
<OID_root>
  <OID_key>2:16:840:1:113863:3:6965</OID_key>
  <OID燭ype>3</OID燭ype>
  <OID燭ype>3</OID燭ype>
  <CodingSystemName>John’s Testing Object for OID Registration Study</CodingSystemName>
  <Symbolic燤eaning>OR Testing</Symbolic燤eaning>
  <Object_description>This is a test entry for illustration of data entry for OID creation in the HL7 OID Registry</Object_description>
  <OID燤eaning>OID type</OID燤eaning>
  <External_OID_flag>No</External_OID_flag>
  <External_OID_type>No</External_OID_type>
  <Contact_person_data>John Doe</Contact_person_data>
  <Responsible_party>Responsible party</Responsible_party>
  <Responsible_party_address>John Doe’s Mysterious Company</Responsible_party_address>
  <Responsible_party_address>Some Suite in some suite, Somewhere, MN 56174-1234</Responsible_party_address>
  <Responsible_party_phone>1 555-123-4567</Responsible_party_phone>
  <Responsible_party_email>john@someemail.com</Responsible_party_email>
  <Responsible_party_URL>http://www.somewhere.com/Responsible_party_URL</Responsible_party_URL>
  <Contact_person>John Doe</Contact_person>
  <Contact_person_address>Some Suite in some suite, Somewhere, MN 56174-1234</Contact_person_address>
  <Contact_person_phone>1 555-123-4567</Contact_person_phone>
  <Contact_person_email>john@someemail.com</Contact_person_email>
  <Contact_person_info>Chef Cook and Bottle Washer</Contact_person_info>
  <Date_beginning>2016-09-12 00:00:00</Date_beginning>
  <Date_end>2016-09-12 00:00:00</Date_end>
  <Submitter_first_name>William</Submitter_first_name>
  <Submitter_last_name>Tuck</Submitter_last_name>
  <Submitter_email>someone@someemail.com</Submitter_email>
  <Submitter_phone>1 555-123-4567</Submitter_phone>
  <Submitter_address>Some Suite in some suite, Somewhere, MN 56174-1234</Submitter_address>
  <Assignment_status>Pending</Assignment_status>
  <Date_finalized>2016-09-12 00:00:00</Date_finalized>
  <Entry_timestamp>2016-09-12 19:29:36.42</Entry_timestamp>
  <Submitter_email>someone@someemail.com</Submitter_email>
  <Preferred_Realm>US</Preferred_Realm>
  <Preferred_Realm>US</Preferred_Realm>
</OID_root>
```
Next, an approval Confirmation Email

- After the OID is registered it is in a status pending review
- After review for completeness and other potential issues, it is approved by an administrator
- Upon approval, an email is sent to the contact person that it has been approved
- The email contains all of the data entered, as well as any corrections that may have been made if problems were found
- After this, the OID shows up in searches of the Registry
- Note that pending OIDs do not show up in default searches and output lists
Editing the Data of an Entry

- OID Data may change over time
  - Organizations change names
  - Contact Persons/Responsible Bodies change jobs, titles, phone numbers, email addresses
  - Other data may change as well

- Some data may have been entered incorrectly and needs to be fixed
  - Issues found on approval review will trigger an email request to be corrected

- Use the ‘Edit My OID Data’ function on the main OID Registry Home Page
Edit Your OID Entry Data

Edit OID data from the lower left pane.

Enter the OID and the OID Key, then click on ‘Edit OID’.

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HL7-Assigned OIDs

HL7 has established this OID registry and assigns OIDs in its branch for HL7 users and vendors upon their request in its role as an ISO Registration Authority. HL7 also assigns OIDs to public identifier-
What if I lost my OID Key?

- OID keys are sometimes lost
  - Contact Persons and Submitters may have left the company

- You can retrieve the OID keys with the email address of the contact person or original submitter

- If neither person is with the company and the email addresses are no longer valid, then you must contact the OID administrator to manually locate the security key
Retrieve Your OID Keys

Enter the email address of the Submitter or Contact Person

Click on ‘Email OID Keys’ and a list of all the OIDs and their OID Keys associated with that email address will be sent
The Edit Screen

- The Edit Screen contains all the data entered during registration
- Almost all fields can be modified
  - Cannot change Submitter information
  - Cannot change the OID value, Status, or Type
  - For any of these, you must do a new registration or contact the administrator
- Put your cursor in any field whose data must be updated
- Type in the new information
Save The Changes

- After you have changed any data that needs updating, you must save the entry.
- If you wish to abandon the edit session and discard your changes, click on the HL7 logo or the ‘Home’ link in the upper left.
- Click on ‘Update Information’ to save your changes.
Saved Changes Confirmation

- After clicking on ‘Update Information’ you will see the confirmation screen above
- If there are any problems or issues, they will be reported on this screen
- That is all there is to it!
Getting Help and Information

- There is a FAQ for the HL7 OID Registry
- URL:
- Click on any topic for a description/explanation of it
Additional Reference Materials

- A Whitepaper that describes how to setup your own tree of OIDs is also available: http://www.hl7.org/implement/standards/product_brief.cfm?product_id=210

- If all else fails, a request for assistance can be made using email links on the OID Registry web page
  - It may be some time before someone gets back to you on such requests