Clinical Data Repository Patient Matching Update

August 17, 2017

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Created by and for the local healthcare community, OneHealthPort solves information exchange and workflow problems shared across healthcare organizations.

Agenda

- Background on Patient Matching
  - Standards
  - What we know about CDR match data
  - What we did to match
- What we heard
- New match flows
  - Submitting the ProviderOne (P1) identifier with demographics
  - Submitting the SSN with demographic
  - CCDs with multiple names

Standards

- PIX – query to get an identifier – submit a known identifier and receive back the identifier the queried system/repository is looking for.

  – OHP HIE does not accept external PIX queries currently since it normally implies you are registering the external identifier and that is not currently supported – only Sponsors can register lives in the system

- PDQ – query to find an identifier using demographics

  – Returns the Sponsor ID, the Global ID and MPI-stored demographics

What We Heard about Standards

- Vendors are not ready to use PDQ to get identifiers from CDR

- Many practices don't store Sponsor's Patient ID (P1)

- Don't want to manually look up identifiers

- Don't want to store and program OIDs assigned by the HIE – have OIDs from vendors or large enterprise
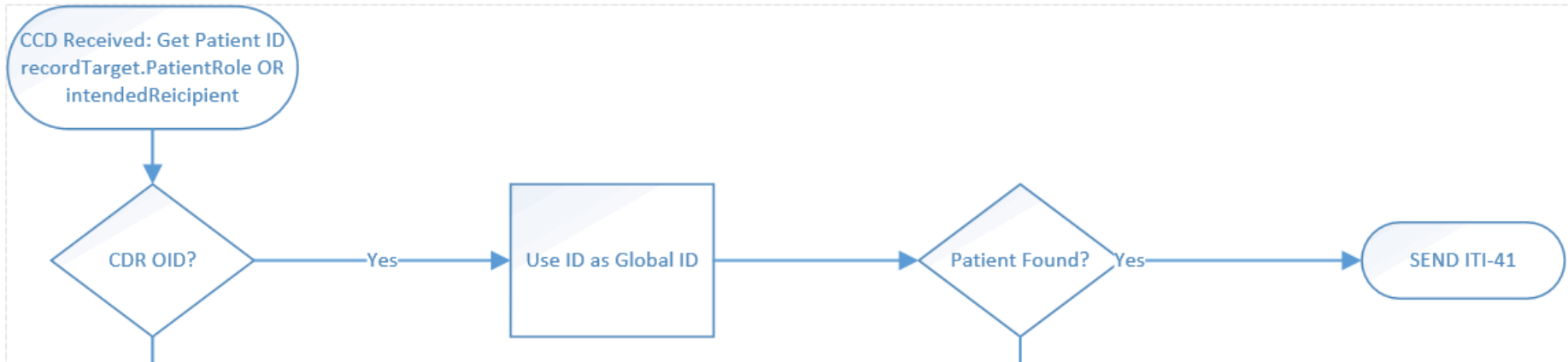
CDR Hosted "Assist" Workflows

- Patient Identifier help – can accept:
  - Patient demographics
  - Sponsor identifiers
  - CDR Global Patient identifier
  - PDQ to supply CDR Global Patient Identifier

- Facility Identifier help – can accept:
  - Direct address of a facility
  - OID issued by OHP HIE
  - OID issued by vendor
  - OID registered to entity organization

- Direct address or OIDs not known to OneHealthPort must be reported prior to testing.
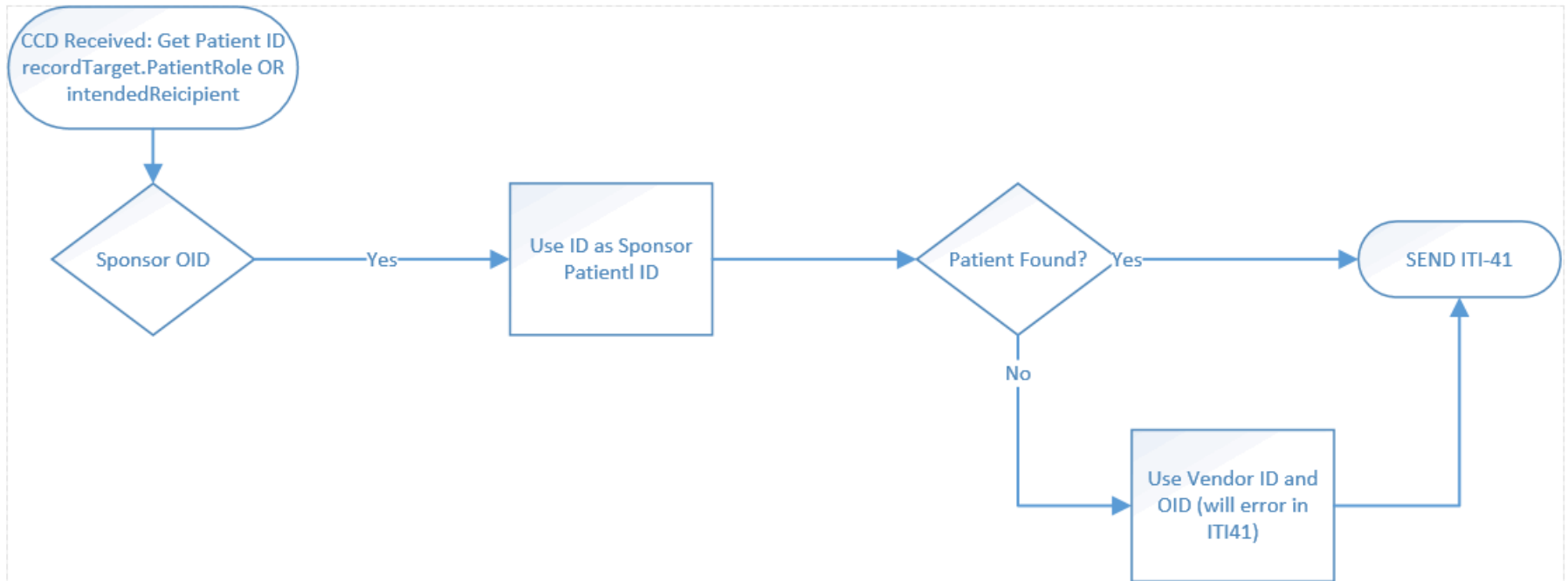
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What We Know

- HCA Medicaid eligibility data changes at a higher rate than commercial insurance eligibility

- High frequency of changes to address information make it less reliable as a match criteria

- HCA collects SSN and reports it to the CDR for use in supporting matching records

- The CDR is NOT a community MPI – it is a sponsor repository and the matching is intended to support the CDR based on what HCA provides

- While the CDR software can do weighting and probabilistic and deterministic logic matching for new lives added by a sponsor, it does not offer that same logic for lives being queried using a PIX or PDQ or included in a C-CDA document submission demographic section.
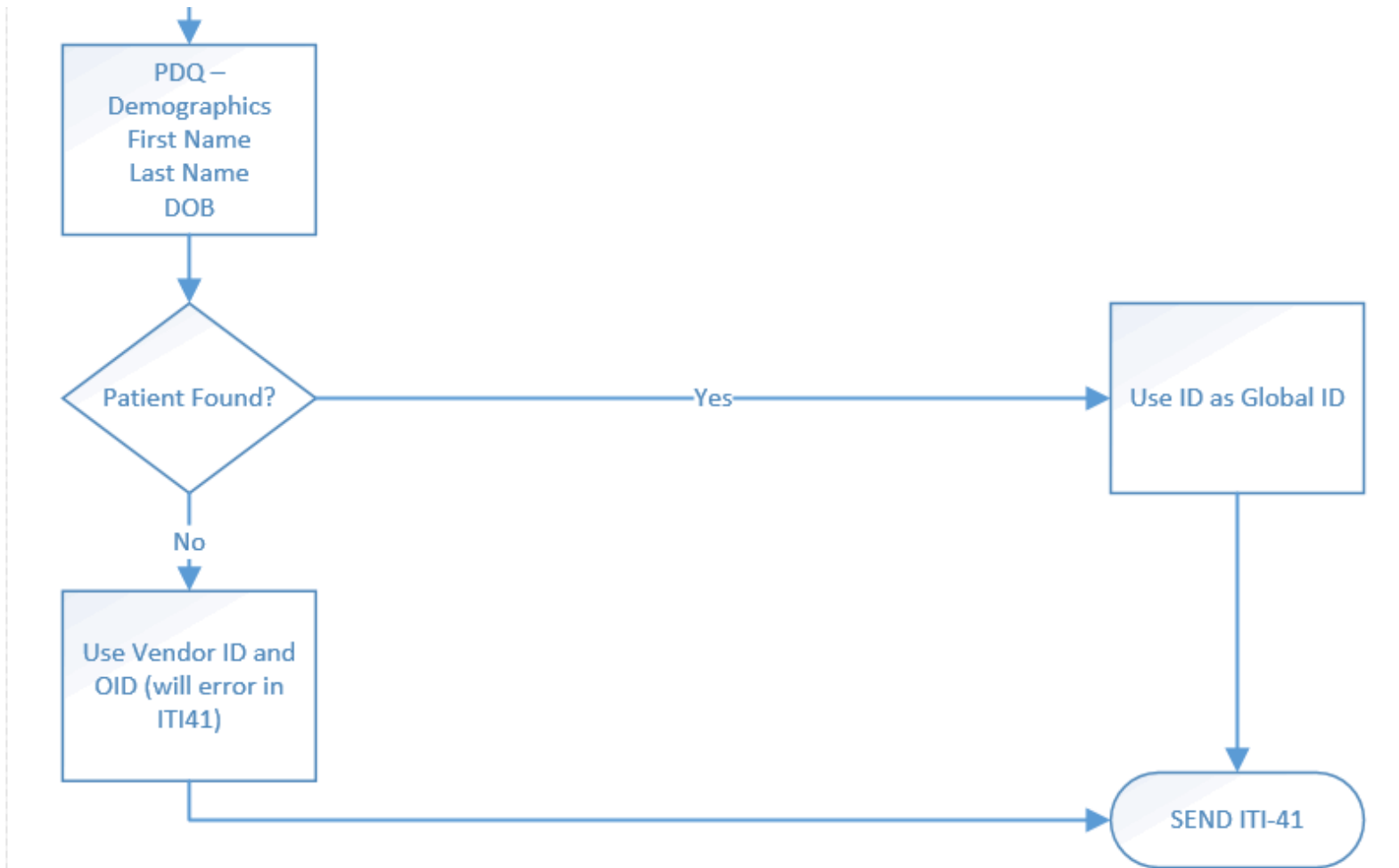
Known Global ID

- CCD received with CDR OID – indicates system should look for Global ID

- Patient Match found – global ID verified

- Global ID used in ITI-41 and CCD submitted to CDR

Sponsor ID Match

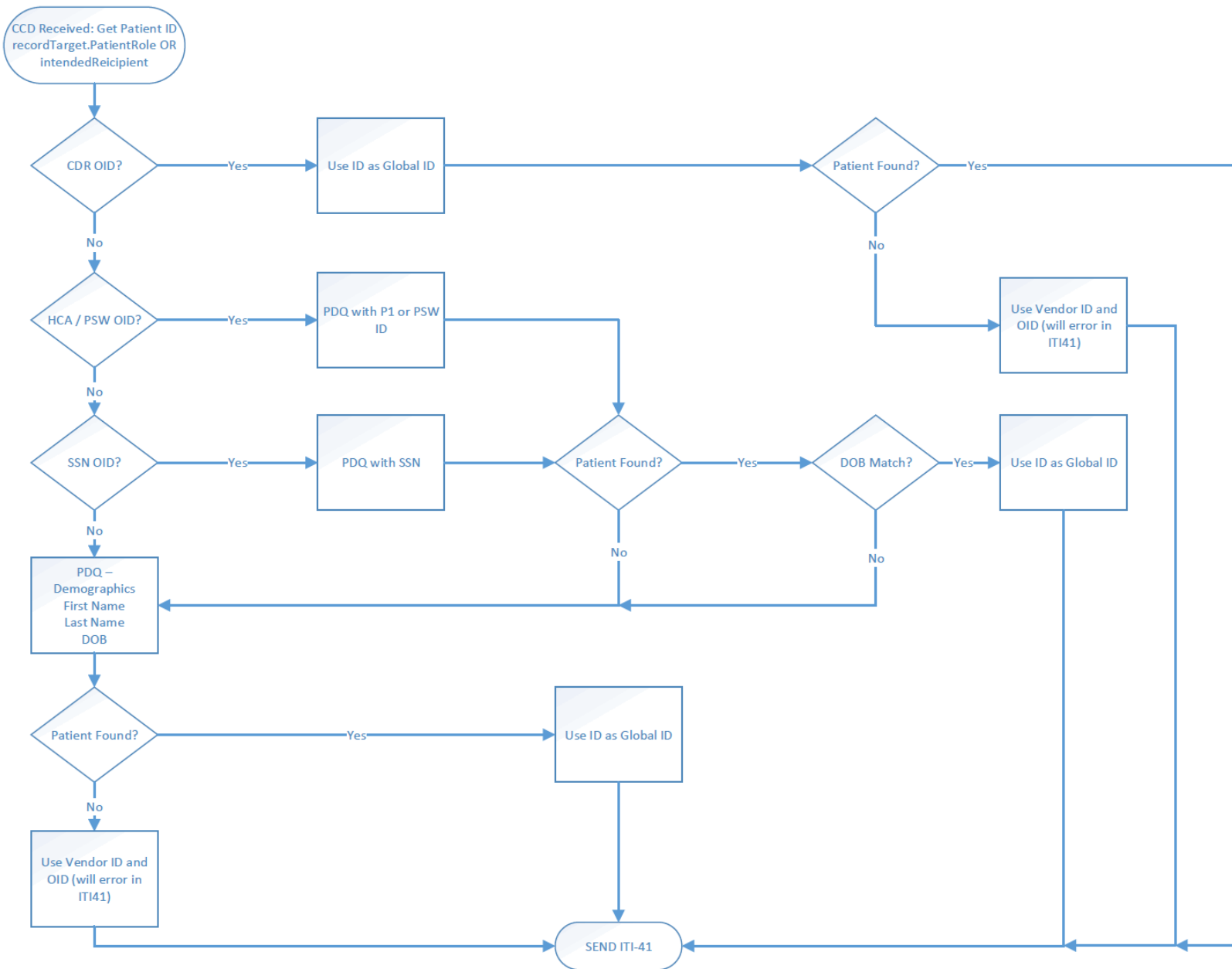# PDQ Based on Demographics

Old Match Options

- If the Sponsor OID is used and the Sponsor Patient identifier is included, it currently does a match based on the Sponsor Patient ID alone similar to the Global ID match.

- If no identifiers are provided the match is made on a PDQ using first name, last name, date of birth.

- If no match is found the CCD is rejected by the CDR for no patient match

What We Heard

- Had not been accepting the SSN as a possible match field – some vendors support this field.

- Concerns that the Sponsor Patient Identifier or the SSN could have keying errors and should not be trusted as a single match.

- Observed more CCDs coming with multiple patient names in the demographic section.

- *What we did…*
  - Looked at ways to alter our proxy PDQ workflow to incorporate multiple checks before failing a match.

New Patient Matching

- If Sponsor ID matches submitted ID
  - check DOB (in CCD with system record) to verify 2nd attribute match
  - if no match then move to PDQ using FN/LN/DOB

- Added SSN match, if there is a match
  - check DOB (in CCD with system record) to verify 2nd attribute match
  - if no match then move to PDQ using FN/LN/DOB
  - Can accept SSN with or without dashes

- Added logic to handle multiple names in CCD
  - Look for "L" = legal name qualifier and use that in PDQ
  - If no "L" qualifier found – take first name on the list for PDQ

- The order of the Patient Identifier entry in the C-CDA document no longer matters, we now review all fields regardless of order.

CCD Received: Get Patient ID recordTarget.PatientRole OR intendedReicipient

CDR OID? — Yes → Use ID as Global ID → Patient Found? — Yes →

No ↓

HCA / PSW OID? — Yes → PDQ with P1 or PSW ID

Patient Found? — No → Use Vendor ID and OID (will error in ITI41)

No ↓

SSN OID? — Yes → PDQ with SSN → Patient Found? — Yes → DOB Match? — Yes → Use ID as Global ID

No ↓

PDQ – Demographics First Name Last Name DOB

Patient Found? — Yes → Use ID as Global ID

No ↓

Use Vendor ID and OID (will error in ITI41)

SEND ITI-41

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Questions/Discussion

Other ideas we should explore

Thank You for Your Feedback

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Appendix

- Slides included for reference use
- Updated to reflect new proxy PDQ workflow

C-CDA Submission Options

Options	Description
Connectivity Pathways	OneHealthPort CDR accepts C-CDA data submissions using: • AS2 connectivity - XDS.b or C-CDA • Web Services - ITI-41 XDS.b protocol • Direct Messaging - XDR and XDM
Message Format	OneHealthPort CDR accepts: • XDS.b - Simple soap, and MTOM • Direct - Single C-CDA per message
Organization Identifiers	OneHealthPort CDR will accept: • OneHealthPort HIE assigned OID • Organization's OID already in use in C-CDA messages • OID assigned by organization's vendor or obtained by organization • Direct address if using Direct delivery
Patient Identifiers	OneHealthPort CDR runs patient demographic query (PDQ) on C-CDA messages using patient demographic information after checking: • Sponsor Identifier if supplied • Social Security Number (SSN) if supplied • Cross checks match with demographics from the C-CDA

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Patient Identification

CDR accepts C-CDA submissions for *known sponsored patients.* CDR supports four approaches for patient matching.

Matching By:	Operational Considerations:
CDR Global Patient Identifier	Best option for patient matching result for C-CDA data submissions. PDQ is run before submission to obtain patient identifier or list of "possible matches" to select from for insertion of identifiers into the C-CDA Patient Role section of the message header.
Sponsor Patient Identifier	Next best option for patient matching result for C-CDA data submissions. No PDQ required if the organization knows and has the patient identifier for use in the C-CDA.
Social Security Number (SSN)	HCA has provided the SSN to the CDR as an alternate match option if the provider organization stores this information on the patient. This is now a supported match (with or without dashes in the SSN). Social Security OID: 2.16.840.1.113883.4.1
Patient Demographics Submitted in C-CDA	CDR will programmatically run a PDQ using patient demographics for C-CDAs submitted without a known patient identifier. If no exact match found from demographics, CDR will return "no match" error and error handling processes will need to be managed by the organization.

Using Known Patient Identifiers

Known Identifiers

CDR Sponsor and sponsor's patient identifier is known:

```
<patientRole>
<id extension="123456789WA"
root="1.3.6.1.4.1.38630.3.1"/>
<id extension="135792468"
root="1.3.6.1.4.1.38630.2.1.1.10"/>
```

- If the provider organization knows the Sponsor's patient identifier, then this identifier and the Sponsor's CDR object identifier (OID) can be inserted into the C-CDA before submission to the CDR.

- *Sponsor patient identifier* is inserted in the patient role id extension attribute section of the C-CDA.

- The *Sponsor CDR OID* is inserted in the patient role id root attribute section of the C-CDA.

- The second id extension attribute pictured is the source (sending) organization's unique patient identifier (typically a medical record number MRN), and the id root attribute must be the source organization's OneHealthPort HIE assigned OID or the organization's OID reported to OneHealthPort for use with the C-CDA submissions. This is a required id element as it will be validated at the CDR and error if it is not a recognized OID**.**

Using PDQ Before C-CDA Submissions

Querying For Identifiers

- If the provider organization does not know the patient identifier, then this identifier and the CDR object identifier (OID) can be obtained using a PDQ.

- ***CDR Global patient identifier*** is returned in the PDQ response and inserted in the patient role id extension attribute section of the C-CDA.

- The ***CDR OID*** is returned in the PDQ response and inserted in the patient role id root attribute section of the C-CDA.

- The second id extension attribute pictured is the source (sending) organization's unique patient identifier (typically a medical record number MRN), and the id root attribute must be the source organization's OneHealthPort HIE assigned OID or the organization's OID reported to OneHealthPort for use with the C-CDA submissions. This is a required id element as it will be validated at the CDR and error if it is not a recognized OID.

CDR Sponsor and sponsor's patient identifier is unknown:
```
<patientRole>
<id extension="1234567" root="1.3.6.1.4.1.38630.3"/>
<id extension="135792468" root="1.3.6.1.4.1.38630.2.1.1.10"/>
```