

Integrating the Healthcare Enterprise



5 **IHE Quality Research and Public Health
Technical Framework Supplement**

10 **Prescription Repository Query
(PRQ)**

HL7[®] FHIR[®] STU 4

Using Resources at FMM Level 2-N

15 **Revision 1.0 – Draft for Public Comment**

20 Date: June 17, 2019
Author: QRPH Technical Committee
Email: qrph@ihe.net

25 **Please verify you have the most recent version of this document. See [here](#) for Trial Implementation and Final Text versions and [here](#) for Public Comment versions.**

Foreword

30 This is a supplement to the IHE Quality Research and Public Health Technical Framework. Each
supplement undergoes a process of public comment and trial implementation before being
incorporated into the volumes of the Technical Frameworks.

This supplement is published on June 17, 2019 for Public Comment. Comments are invited and
can be submitted at https://www.ihe.net/QRPH_Public_Comments. In order to be considered in
35 development of the Trial Implementation version of the supplement, comments must be received
by July 17, 2019.

This supplement describes changes to the existing technical framework documents.

“Boxed” instructions like the sample below indicate to the Volume Editor how to integrate the
relevant section(s) into the relevant Technical Framework volume.

| |
|--|
| <i>Amend Section X.X by the following:</i> |
|--|

40 Where the amendment adds text, make the added text **bold underline**. Where the amendment
removes text, make the removed text **~~bold strikethrough~~**. When entire new sections are added,
introduce with editor’s instructions to “add new text” or similar, which for readability are not
bolded or underlined.

45 General information about IHE can be found at www.ihe.net.

Information about the IHE Quality Research and Public Health domain can be found at
ihe.net/IHE_Domains.

Information about the organization of IHE Technical Frameworks and Supplements and the
process used to create them can be found at http://ihe.net/IHE_Process and <http://ihe.net/Profiles>.

50 The current version of the IHE Quality Research and Public Health Technical Framework can be
found at http://ihe.net/Technical_Frameworks.

CONTENTS

| | | |
|----|--|-----------|
| 55 | Introduction to this Supplement..... | 6 |
| | Open Issues and Questions | 7 |
| | Closed Issues | 7 |
| | General Introduction and Shared Appendices | 9 |
| 60 | Appendix A – Actor Summary Definitions | 9 |
| | Appendix B – Transaction Summary Definitions..... | 9 |
| | Appendix D – Glossary..... | 9 |
| | Volume 1 – Profiles | 10 |
| | Copyright Licenses..... | 10 |
| 65 | Domain-specific additions | 10 |
| | X Prescription Repository Query (PRQ) Profile | 11 |
| | X.1 PRQ Actors, Transactions, and Content Modules..... | 11 |
| | X.1.1 Actor Descriptions and Actor Profile Requirements..... | 12 |
| | X.1.1.1 Content Creator..... | 12 |
| 70 | X.1.1.2 Content Consumer | 12 |
| | X.1.1.2 Data Consumer | 13 |
| | X.1.1.2 Data Creator..... | 13 |
| | X.2 PRQ Actor Options | 13 |
| | X.2.1 CDA Option | 13 |
| 75 | X.2.2 FHIR Option..... | 13 |
| | X.2.3 Discrete Data Import Option..... | 13 |
| | X.3 PRQ Required Actor Groupings | 14 |
| | X.4 PRQ Overview | 14 |
| | X.4.1 Concepts | 14 |
| 80 | X.4.2 Use Cases | 14 |
| | X.4.2.1 Use Case #1: Identifying Drug Seeking Behavior..... | 14 |
| | X.4.2.1.1 Identifying Drug Seeking Behavior Use Case Description | 14 |
| | X.4.2.1.2 Identifying Drug Seeking Behavior Process Flow | 15 |
| | X.4.2.2 Use Case #2: Drug to Drug Interaction | 16 |
| 85 | X.4.2.2.1 Drug to Drug Interaction Use Case Description..... | 16 |
| | X.4.2.2.2 Drug to Drug Interaction Process Flow | 16 |
| | X.5 PRQ Security Considerations..... | 17 |
| | X.6 PRQ Cross Profile Considerations | 17 |
| | Appendices..... | 18 |
| 90 | Volume 2 – Transactions | 19 |
| | 3.Y Query for Patient Medications [QRPH57 | 19 |
| | 3.Y.1 Scope | 19 |
| | 3.Y.2 Actor Roles..... | 19 |
| | 3.Y.3 Referenced Standards | 19 |
| 95 | 3.Y.4 Messages | 20 |

| | | |
|-----|--|-----------|
| | 3.Y.4.1 Query for Patient Medications..... | 20 |
| | 3.Y.4.1.1 Trigger Events..... | 20 |
| | 3.Y.4.1.2 Message Semantics | 20 |
| | 3.Y.4.1.3 Expected Actions | 20 |
| 100 | 3.Y.5 Protocol Requirements | 21 |
| | 3.Y.6 Security Considerations..... | 21 |
| | 3.Y.6.1 Security Audit Considerations | 21 |
| | 3.Y.6.(z) Actor Specific Security Considerations | 21 |
| | Appendices..... | 22 |
| 105 | Volume 2 Namespace Additions | 23 |
| | Volume 3 – Content Modules..... | 24 |
| | 5 IHE Namespaces, Concept Domains and Vocabularies | 24 |
| | 5.1 IHE Namespaces | 24 |
| | 5.2 IHE Concept Domains | 24 |
| 110 | 5.3 IHE Format Codes and Vocabularies..... | 24 |
| | 5.3.1 IHE Format Codes..... | 24 |
| | 5.3.2 IHEActCode Vocabulary | 24 |
| | 5.3.3 IHERoleCode Vocabulary..... | 24 |
| | 6 Content Modules..... | 25 |
| 115 | 6.3.1 CDA Document Content Modules | 25 |
| | 6.3.1.D Prescription Repository Query (PRQ) Document Content Module | 25 |
| | 6.3.1.D.1 Format Code | 25 |
| | 6.3.1.D.2 Parent Template | 25 |
| | 6.3.1.D.3 Referenced Standards | 25 |
| 120 | 6.3.1.D.4 Data Element Requirement Mappings to CDA | 25 |
| | 6.3.1.D.5 Prescription Repository Query (PRQ) Document Content Module Specification | 27 |
| | 6.3.2 CDA Header Content Modules | 29 |
| | 6.3.2.H1 Patient Information Header Content Module | 29 |
| 125 | 6.3.2.H2 Healthcare Provider Information Header Content Module | 30 |
| | 6.3.2.H3 Healthcare Provider Information - Person Header Content Module | 30 |
| | 6.3.2.H3.1 Healthcare Provider Information - Person Header Jurisdiction Identifier Constraint..... | 31 |
| | 6.3.2.H4 Healthcare Provider Information – Organization Header Content Module | 31 |
| 130 | 6.3.3 CDA Section Content Modules..... | 32 |
| | 6.3.3.10.S1 Medication List - Section Content Module | 32 |
| | 6.3.4 CDA Entry Content Modules | 33 |
| | 6.5 QRPH Value Sets and Concept Domains | 35 |
| | 6.5.x.1 FHIR Resource Bundle Content..... | 35 |
| 135 | 6.6.X.1.2 FHIR Resource Data Specifications | 35 |
| | Volume 4 – National Extensions | 39 |
| | 4 National Extensions | 39 |

| | | |
|-----|---|----|
| | 4.I National Extensions for the United States | 39 |
| | 4.I.1 Comment Submission | 39 |
| 140 | 4.I.2 Prescription Repository Query (PRQ) | 39 |
| | 4.I.2.1 PRQ US Volume 3 Constraints | 39 |
| | 4.I.2.1.1 US Volume 3 Attribute Constraints..... | 39 |
| | 4.I.2.1.2 PRQ US Volume 3 Section Constraints | 39 |
| | Appendices..... | 41 |
| 145 | Appendix A – Content Module Data Element Definitions | 41 |
| | A.1 NCPDP Request Transport Layer Document Definitions | 41 |
| | A.2 NCPDP Request Body Document Definitions..... | 41 |
| | A.3 NCPDP Response Transport Layer Document Definitions | 42 |
| | A.4 NCPDP Response Body Document Definitions | 43 |
| 150 | | |

Introduction to this Supplement

155 Whenever possible, IHE profiles are based on established and stable underlying standards. However, if an IHE domain determines that an emerging standard has high likelihood of industry adoption, and the standard offers significant benefits for the use cases it is attempting to address, the domain may develop IHE profiles based on such a standard. During Trial Implementation, the IHE domain will update and republish the IHE profile as the underlying standard evolves.

160 Product implementations and site deployments may need to be updated in order for them to remain interoperable and conformant with an updated IHE profile.

This PRQ Profile is based on Release 4 of the emerging HL7^{®1} FHIR^{®2} specification. HL7 describes FHIR Change Management and Versioning at <https://www.hl7.org/fhir/versions.html>.

HL7 provides a rating of the maturity of FHIR content based on the FHIR Maturity Model (FMM): level 0 (draft) through N (Normative). See <http://hl7.org/fhir/versions.html#maturity>.

165 The FMM levels for FHIR content used in this profile are:

| FHIR Content (Resources, ValueSets, etc.) | FMM Level |
|--|------------------|
| Patient | N |
| Practitioner | 3 |
| Organization | 3 |
| Medication | 3 |
| MedicationDispense | 2 |

170 This transaction profile will integrate a prescription drug repository into electronic medical records workflow to provide prescription drug information to physicians so they can make informed decisions on medication they should provide to their patients. This will help improve patient outcomes and prevent deadly drug to drug interactions.

175 This supplement references the following documents. The reader should review these documents as needed:

1. PHARM Common parts document

¹ HL7 is the registered trademark of Health Level Seven International.

² FHIR is the registered trademark of Health Level Seven International.

2. PHARM Community Medication Prescription and Dispense Integration Profile (CMPD)
3. PCC Technical Framework, Volume 1
4. PCC Technical Framework, Volume 2
- 180 5. PCC Technical Framework Supplement: CDA^{®3} Content Modules
6. IT Infrastructure Technical Framework Volume 1
7. IT Infrastructure Technical Framework Volume 2
8. IT Infrastructure Technical Framework Volume 3
- 185 9. Opioid Epidemic: Integrating Electronic Medical Records and Prescription Drug Monitoring Programs to limit abuse of controlled substances QRPH White Paper
10. HL7 FHIR US Meds Prescription Drug Monitoring Program (PDMP) FHIR Implementation Guide

Open Issues and Questions

- 190 1. There is no model for “days supplied,” can this be computed with dosage quantity and frequency (5/1/2019)?
2. Healthcare provider information is listed as optional in volume 4 because this information is found through the DEA number. Would it make sense to make it optional or to keep it as RE (5/2/2019)?
- 195 3. Community Dispense Document data elements found in PML will not be used in this profile because the requirements of these elements will be fulfilled by the Dispenser and Performer elements already listed (5/2/2019).
4. The Repeat Number data element in DIS indicates that it SHALL NOT be present, but will be included in this profile as RE (5/2/2019).
- 200 5. Based on [ONC ISA](#) need to consider adding NCPDP 2017071 mapping to Appendix A as it is the next listed standard for implementation. It is going into effect January 1, 2020 (5/10/2019).

Closed Issues

1. PML will have to be constrained to fit the use case requirements of this profile (3/26/2019).
- 205 2. Submitting the prescription dispensing data to the repository is out of scope of this profile (3/26/2019).

³ CDA is the registered trademark of Health Level Seven International.

- 210
3. PML does not need to be expanded. Vol 4 will take care of the US centric Data elements (3/26/2019).
 4. Healthcare provider organization information is missing form NCPDP and FHIR PDMP IG, because it is found with the DEA or NPI number (5/2/2019).
 5. Dispenser information is missing form NCPDP and FHIR PDMP IG, because it is found with the DEA or NPI number (5/2/2019).

General Introduction and Shared Appendices

215 The [IHE Technical Framework General Introduction and Shared Appendices](#) are components shared by all of the IHE domain technical frameworks. Each technical framework volume contains links to these documents where appropriate.

*Update the following appendices to the General Introduction as indicated below. Note that these are **not** appendices to Volume 1.*

220

Appendix A – Actor Summary Definitions

Add the following actors to the IHE Technical Frameworks General Introduction Appendix A:

No new actors are used in this profile

Appendix B – Transaction Summary Definitions

225 *Add the following transactions to the IHE Technical Frameworks General Introduction Appendix B:*

| Transaction Name and Number | Definition |
|--------------------------------------|---|
| Dispensed Medication Query [QRPH-57] | A FHIR query for a patient's dispensed medication list from an HIE or a prescription drug repository. |

Appendix D – Glossary

230 *Add the following **new** glossary terms to the IHE Technical Frameworks General Introduction Appendix D.*

None

235

Volume 1 – Profiles

Copyright Licenses

N/A

Domain-specific additions

N/A

240

Add new Section X

X Prescription Repository Query (PRQ) Profile

245 In the past several years there has been a drastic increase of opioid abuse that has become a
problem amongst many countries. In the United States and Canada opioid overdose deaths have
become the number one cause of death (PHAC, 2018). Prescription drug repositories collect data
on prescribing and dispensing of controlled substances. Providers, pharmacists, and others can
250 use the data in those repositories to address overuse of opioids, drug diversion, physician
shopping, and prevent accidental, life threatening, drug to drug interactions. This profile can help
integrate this program into an Electronic Health Record (EHR) and help simplify the workflow
and inform the physician when prescribing medications to a patient.

X.1 PRQ Actors, Transactions, and Content Modules

255 This section defines the actors, transactions, and/or content modules in this profile. General
definitions of actors are given in the Technical Frameworks General Introduction Appendix A.
IHE Transactions can be found in the Technical Frameworks General Introduction Appendix B.
Both appendices are located at http://ihe.net/Technical_Frameworks/#GenIntro

Figure X.1-1 shows the actors directly involved in the PRQ Profile and the direction that the
content is exchanged.

260 A product implementation using this profile may group actors from this profile with actors from
a workflow or transport profile to be functional. The grouping of the content module described in
this profile to specific actors is described in more detail in Required Actor Groupings QRPH TF-
1: X.6 or in Cross Profile Considerations QRPH TF-1: X.6.



265

Figure X.1-1: PRQ Actor Diagram

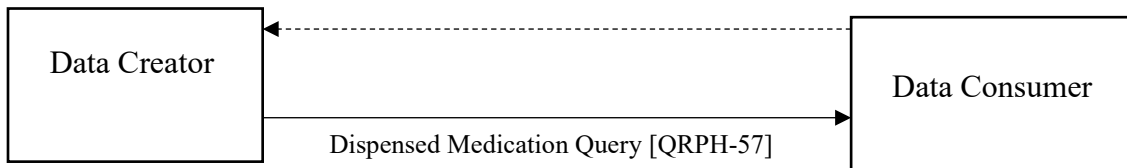


Figure X.1-2: PRQ Actor Diagram

270 Table X.1-1 lists the content module(s) defined in the PRQ Profile. To claim support with this profile, an actor shall support all required content modules (labeled “R”) and may support optional content modules (labeled “O”).

Table X.1-1: PRQ – Actors and Content Modules

| Actors | Content Modules | Optionality | Reference |
|------------------|--|-------------|---------------------|
| Content Creator | The Query Pharmacy Documents [PHARM 1] | R | PHARM TF-3: 6.3.1.D |
| Content Consumer | The Query Pharmacy Documents [PHARM 1] | R | PHARM TF-3: 6.3.1.D |
| Data Consumer | Dispensed Medication Query [QRPH-57] | R | QRPH TF-2: XXX |
| Data Creator | Dispensed Medication Query [QRPH-57] | R | QRPH TF-2: XXX |

X.1.1 Actor Descriptions and Actor Profile Requirements

275 Transactional requirements are documented in QRPH TF-2 Transactions. This section documents any additional requirements on profile’s actors.

Content module requirements are documented in QRPH TF-2 Content Modules. This section documents any additional requirements on profile’s actors.

X.1.1.1 Content Creator

280 The Content Creator shall be responsible for the creation of content and sharing of the patient’s dispensed medications containing the data elements defined in QRPH TF-3: 6.3.1.D.4.

X.1.1.2 Content Consumer

A Content Consumer is responsible for viewing, importing, or other processing options for PRQ document content created by a PRQ Content Creator. This is specified in [PCC-1] document sharing transaction in PCC TF-2: 3.1.

285 **X.1.1.2 Data Consumer**

The Data Consumer is responsible for initiating a query to the Data Responder system for data elements meeting certain criteria and can retrieve selected data supplied by the Data Responder.

X.1.1.2 Data Creator

290 The Data Responder shall be responsible for the creation of content and the transmission of PRQ data elements to a Data Consumer.

X.2 PRQ Actor Options

Options that may be selected for each actor in this profile, if any, are listed in the Table X.2-1. Dependencies between options, when applicable, are specified in notes.

Table X.2-1: Prescription Repository Query – Actors and Options

| Actor | Option Name | Reference |
|------------------|--|------------------|
| Content Creator | CDA Option ^{Note1} | Section X.2.1 |
| Content Consumer | View Option ^{Note2} | QRPH TF-2: 3.1.1 |
| | Document Import Option ^{Note2} | QRPH TF-2: 3.1.2 |
| | Section Import Option ^{Note2} | QRPH TF-2: 3.1.3 |
| | Discrete Data Import Option ^{Note2} | QRPH TF-2: 3.1.4 |
| Data Creator | FHIR Option | Section X.2.2 |

295 Note 1: The Content Creator must be able to support at least one of these options.

Note 2: The Content Consumer must implement at least one of these options.

Note 3: If the Content Consumer implements any of these options, it must also support the Discrete Data Import Option

X.2.1 CDA Option

300 This option defines the processing requirements placed on the Content Creators for producing a CDA structured document version of the PRQ documents. The CDA details are in Volume 3, Section 6.3.1.D.4.

X.2.2 FHIR Option

305 This option defines the processing requirements placed on the Data Creators for producing a FHIR document bundle version of the PRQ documents. The FHIR bundle details are in Volume 3, Section 6.5.x.1.

X.2.3 Discrete Data Import Option

Refer back to PCC-1. This profile extends the requirements for this option to include the importing of the discrete data elements contained in Volume 3, Section TF-3: 6.3.1.D.4.

310 **X.3 PRQ Required Actor Groupings**

There are no required actor groupings for this profile.

X.4 PRQ Overview

315 PRQ defines services that allow physicians to retrieve their patients' current dispensed medications. This can be useful for identifying potentially deadly drug to drug interactions and over prescribing for opioids.

X.4.1 Concepts

320 Providers, pharmacists, and others can use current prescription drug repository data to address overuse of opioids, drug diversion, physician shopping, and accidental drug to drug interactions. Integrating this information into an Electronic Health Record (EHR) can help simplify the workflow and inform the physician when prescribing medications to a patient.

X.4.2 Use Cases

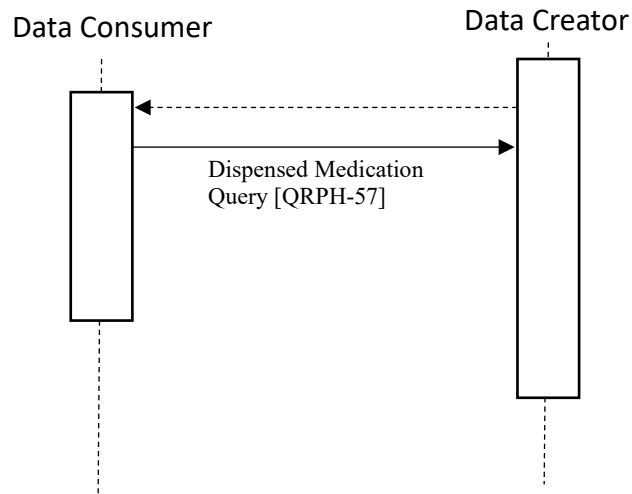
X.4.2.1 Use Case #1: Identifying Drug Seeking Behavior

This use case describes how utilizing an HIE and a prescription monitoring program can help prevent doctor shopping and help identify patients that could use therapy for opioid addiction.

325 **X.4.2.1.1 Identifying Drug Seeking Behavior Use Case Description**

330 A man goes into an emergency room complaining of severe back pain. He is unknown to the provider, so the provider requests the patient's record from the HIE. The patient's dispensed drug information is taken from a prescription drug repository as a part of the e-prescribing workflow. The provider can see that several opioid prescriptions have been given to the patient from different providers. Based on this information, the provider can make the decision to recommend an alternative pain medication to the patient or help start a discussion of therapy.

X.4.2.1.2 Identifying Drug Seeking Behavior Process Flow



335

Figure X.4.2.1.2-1: Basic Process Flow in PRQ Profile

Pre-conditions:

The Provider must be participating in an HIE.

Dispensed prescriptions reports must be sent to a prescription drug repository.

Main Flow:

340

Patient arrives at the emergency room.

A new provider is sent to treat the patient.

The physician looks at the patient's dispensed medication information.

The provider is informed that the patient has been prescribed opioids from outside providers.

The physician makes an informed decision on what to provide the patient for pain.

345

Post-conditions:

The patient is referred to a therapy program.

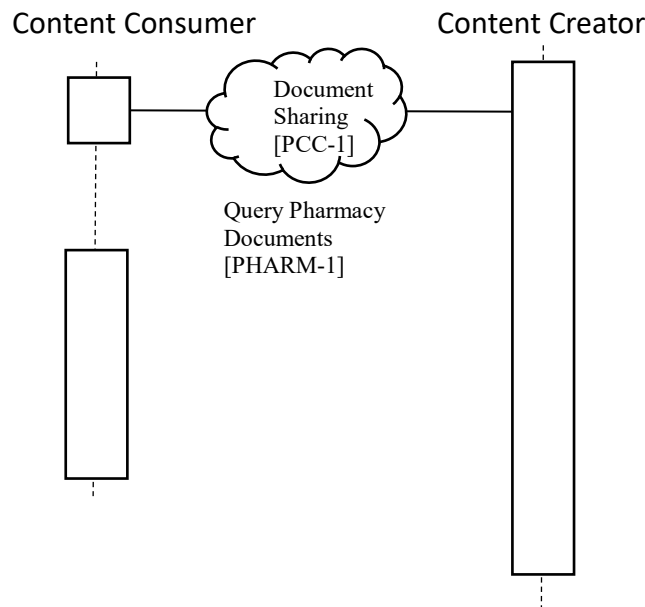
X.4.2.2 Use Case #2: Drug to Drug Interaction

350 This use case describes how a prescription drug repository can help inform physicians on what medications the patient is currently taking so that deadly drug to drug interactions can be prevented.

X.4.2.2.1 Drug to Drug Interaction Use Case Description

355 An elderly patient presents with hypertension, high blood pressure, a history of myocardial infarction, and a history of blood clots. The provider wants to prescribe a medication to treat the hypertension. Before the appointment the provider retrieves the list of dispensed medications that the patient is taking using an integrated prescription drug repository. The provider is able to make sure that the medication they are prescribing is not going to cause an unwanted drug to drug interaction that will be harmful to the patient.

X.4.2.2.2 Drug to Drug Interaction Process Flow



360

Figure X.4.2.2.2-1: Basic Process Flow in PRQ Profile

Pre-conditions:

Dispensed prescriptions reports must be sent to a prescription drug repository.

The Provider must be participating in an HIE that collects the prescription dispensing data.

365 **Main Flow:**

The patient makes an appointment with the provider.

The EHR prefetches the prescription data for the patient from the HIE.

During the patient’s visit the provider can see the medications that have been dispensed to the patient and is able to make an informed decision.

370 The physician prescribes the patient a medication that won’t cause a harmful interaction with the patient’s other medications.

Post-conditions:

The patient picks up their prescription at the pharmacist and their e-prescribing data is sent into a prescription drug repository.

375 **X.5 PRQ Security Considerations**

See ITI TF-2.x: Appendix Z.8 “Mobile Security Considerations”

Transport of PRQ data should be safeguarded according to jurisdictional guidelines and may need to adhere to the security mechanisms from the ITI Audit Trail and Node Authentication (ATNA) Profile. Access to this information may vary depending on jurisdictional laws.

380 **X.6 PRQ Cross Profile Considerations**

The use of the IHE XD* family of transactions is encouraged to support standards-based interoperability between systems acting as the PRQ Content Creator and PRQ Content Consumer. However, this profile does not require any groupings with ITI XD* actors to facilitate transport of the content document it defines.

385 IHE transport transactions that MAY be utilized by systems playing the roles of PRQ Content Creator or Content Consumer to support the standard use case defined in this profile:

A Document Source in XDS.b, a Portable Media Creator in XDM, or a Document Source in XDR might be grouped with the PRQ Content Creator. A Document Consumer in XDS.b, a Portable Media Importer in XDM, or a Document Recipient in XDR might be grouped with the

390 PCS Content Consumer. A registry/repository-based infrastructure is defined by the IHE Cross Enterprise Document Sharing (XDS.b) Profile that includes profile support that can be leveraged to facilitate retrieval of public health related information from a document sharing infrastructure: Multi-Patient Query (MPQ), and Document Metadata Subscription (DSUB). A reliable messaging-based infrastructure is defined by the IHE Cross Enterprise Document Reliable Interchange (XDR) Profile. A Document Source in XDR might be grouped with the PRQ

395 Content Creator. A Document Recipient in XDR might be grouped with the PRQ Content Consumer. Detailed descriptions of these transactions can be found in the IHE IT Infrastructure Technical Framework.

Appendices

400 N/A

Volume 2 – Transactions

Add Section 3.Y

3.Y Query for Patient Medications [QRPH57]

405 The Data Consumer retrieves a patient’s dispensed medications form the Data Creator.

3.Y.1 Scope

This transaction is used to query a prescription drug repository for a patient’s dispensed medications.

3.Y.2 Actor Roles

410

Table 3.Y.2-1: Actor Roles

| | |
|---------------|---|
| Actor: | Data Creator |
| Role: | Provides the requested dispensed medication information requested in the query. |
| Actor: | Data Consumer |
| Role: | Sends a query request for the dispensed medication |

Transaction text specifies behavior for each role. The behavior of specific actors may also be specified when it goes beyond that of the general role.

3.Y.3 Referenced Standards

- 415
- HL7 FHIR standard STU4 <http://hl7.org/fhir/>

3.Y.4 Messages

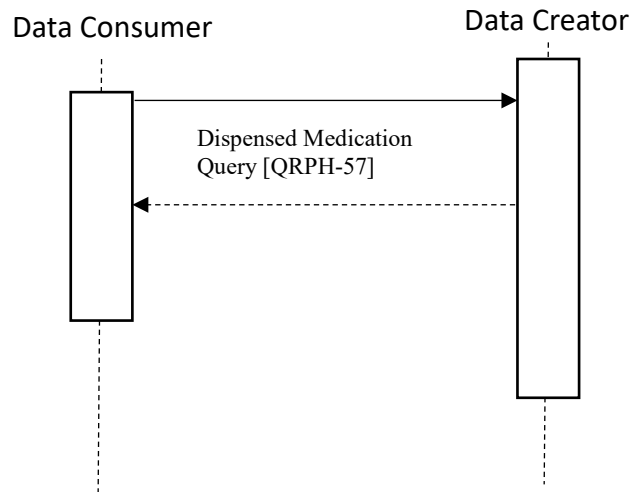


Figure 3.Y.4-1: Interaction Diagram

3.Y.4.1 Query for Patient Medications

420 The Data Consumer initiates a query to the Data Creator. The Data Creator returns the patient’s dispensed medication data to the Data Consumer that will use this data for informing a provider on the medications the patient has been dispensed from other providers.

3.Y.4.1.1 Trigger Events

425 When a provider needs a patient’s dispensed medication history to help make an informed decision for prescribing.

3.Y.4.1.2 Message Semantics

430 The message is a FHIR transaction using a request action by sending an HTTP GET request method specified in QRPH TF-3: 6.6.X.1 Dispensed Medication Query. The FHIR Bundle response is defined by the resource with content as constrained in QRPH TF-3: 6.6.X.1.2 Dispensed Medication Query Response content.

3.Y.4.1.3 Expected Actions

435 The Data Consumer initiates a Dispensed Medication Query [QRPH-57 to retrieve the dispensed medication data resources specified in QRPH TF-3: 6.6.x.1 FHIR Resource Bundle Content using the message semantics specified in Section 3.Y.4.1.2. The Data Creator receives the query and responds with the resources specified in QRPH TF-3: 6.6. 6.6.X.1.2. FHIR Resource Bundle

Content according to FHIR Search specification with the query response information or an error message. See: <http://hl7.org/fhir/>

3.Y.5 Protocol Requirements

N/A

440 3.Y.6 Security Considerations

See ITI TF-2.x: Appendix Z.8 “Mobile Security Considerations”

Note: This assumes the approval of the current ITI- 1036 regarding Appendix Z.8 “Mobile Security Considerations”.

3.Y.6.1 Security Audit Considerations

445 There must be a trusted connection between the Data Creator and Data Consumer. This will be carried out in implementation and can either be a business relationship or a secured connection done through ATNA. The Data Creator has control of what information will be sent. This transaction may include identifiable health information, see the ITI De-Identification White Paper for guidance. Depending upon the implementation and application, may constitute a
450 disclosure of health information that requires audit, encryption, and authentication of the Data Consumer and Data Creator.

3.Y.6.(z) Actor Specific Security Considerations

N/A

455

Appendices

None

Volume 2 Namespace Additions

The QRPH registry of OIDs is located at http://wiki.ihe.net/index.php/QRPH_Registry

460

Volume 3 – Content Modules

5 IHE Namespaces, Concept Domains and Vocabularies

Add to Section 5 IHE Namespaces, Concept Domains and Vocabularies

465 5.1 IHE Namespaces

5.2 IHE Concept Domains

5.3 IHE Format Codes and Vocabularies

5.3.1 IHE Format Codes

470 The following new Format Codes are introduced with the PCS Profile. A complete listing of IHE Format Codes can be found at http://wiki.ihe.net/index.php/IHE_Format_Codes.

| Profile | Format Code | Media Type | Template ID |
|-------------------------------------|---------------------------|------------|--------------------------------|
| Prescription Repository Query (PRQ) | urn:ihe: qrph:prq:2019 | text/xml | 1.3.6.1.4.1.19376.1.7.3.1.1.30 |

5.3.2 IHEActCode Vocabulary

N/A

5.3.3 IHERoleCode Vocabulary

475 N/A

6 Content Modules

6.3.1 CDA Document Content Modules

6.3.1.D Prescription Repository Query (PRQ) Document Content Module

6.3.1.D.1 Format Code

480 The XDSDocumentEntry format code for this content is **urn:ihe:qrph:prq:2019**

6.3.1.D.2 Parent Template

This document is a specialization of the IHE PHARM Community Medication List (PML) Document template (OID = 1.3.6.1.4.1.19376.1.9.1.1.5).

485 Note: The Community Medication List includes requirements for various header elements; name, addr and telecom elements for identified persons and organizations; and basic participations record target, author, and legal authenticator.

6.3.1.D.3 Referenced Standards

All standards which reference in this document are listed below with their common abbreviation, full title, and link to the standard.

490 **Table 6.3.1.D.3-1: Prescription Repository Query (PRQ) Document - Referenced Standards**

| Abbreviation | Title | URL |
|--------------|---|---|
| HL7V3 NE2009 | HL7 V3 2009 Normative Edition | HL7 V3 2009 Normative Edition |
| CDAR2 | HL7 CDA Release 2.0 | HL7 CDA Release 2.0 |
| IHE Pharmacy | IHE PHARM Community Medication List (PML) | Community Medication List Specification (1.3.6.1.4.1.19376.1.9.1.1.5) |
| XMLXSL | Associating Style Sheets with XML documents | Associating Style Sheets with XML documents |

6.3.1.D.4 Data Element Requirement Mappings to CDA

This section identifies the mapping of data between referenced standards into the CDA implementation guide.

Table 6.3.1.D.4-1: PRQ - Data Element Requirement Mappings to CDA

| Clinical Data Element | PRQ |
|----------------------------|---|
| Patient Information | recordTarget/patientRole |
| Patient First Name | recordTarget/patientRole/patient/name |
| Patient Last Name | recordTarget/patientRole/patient/name |
| Patient Date of Birth | recordTarget/patientRole/patient/birthTime |
| Patient Gender | recordTarget/patientRole/patient/administrativeGenderCode |

IHE Quality. Research and Public Health Technical Framework Supplement – Prescription Repository Query (PRQ)

| Clinical Data Element | PRQ |
|--|---|
| Patient Street Address | recordTarget/patientRole/addr |
| Patient City Address | recordTarget/patientRole/addr |
| Patient State Code | recordTarget/patientRole/addr |
| Patient Zip Code | recordTarget/patientRole/addr |
| Patient Telecom | recordTarget/patientRole/telecom |
| Patient Identifier | recordTarget/patientRole/id |
| HCP Person Information | author |
| Prescriber First Name | author/assignedAuthor/assignedPerson/name |
| Prescriber Last Name | author/assignedAuthor/assignedPerson/name |
| Prescriber Street Address | author/assignedAuthor/assignedPerson/Addr |
| Prescriber City Address | author/assignedAuthor/assignedPerson/Addr |
| Prescriber State Code | author/assignedAuthor/assignedPerson/Addr |
| Prescriber Zip Code | author/assignedAuthor/assignedPerson/Addr |
| Prescriber Specialty | author/assignedAuthor/code |
| Prescriber Profession | author/functionCode |
| Prescriber ID Number (e.g., DEA for the practitioner) | author/functionCode |
| Jurisdiction Provider ID Number (e.g., NPI for the practitioner) | author/functionCode |
| Jurisdiction License Identifier | author/assignedAuthor/id |
| Jurisdiction of License | author/assignedAuthor/id |
| Prescriber Telecom | author/assignedAuthor/telecom |
| HCP Organization | author/assignedAuthor/representedOrganization |
| HCP Organization Name | author/assignedAuthor/representedOrganization/name |
| HCP Organization Address | author/assignedAuthor/representedOrganization/addr |
| HCP Organization Telecom | author/assignedAuthor/representedOrganization/telecom |
| Service Event | documentationOf/serviceEvent |
| Prescription Filled Date | author/time |
| Prescription Written Date | author/time |
| Dispenser ID | author/assignedAuthor/id |
| Dispenser Specialty | author/assignedAuthor/code |
| Dispenser Name | author/assignedAuthor/assignedPerson/name |
| Date of Service Event | documentationOf/serviceEvent/effectiveTime |
| Service Event Code | documentationOf/serviceEvent/code |
| Prescription Number | Prescription Item Entry/ID |
| Authorization | authorization/consent |
| Patient contacts | guardian |
| Medicine Entry | Medication Section |
| Medication Code | Medicine Entry/code |

| Clinical Data Element | PRQ |
|---|---|
| Medication Name | Medicine Entry/name |
| Medication Strength | Medicine Entry/Strength |
| Medication Dosage form | Medicine Entry/dosageForm |
| Medication Lot number | Medicine Entry/lotNumber |
| Medication Expiration date | Medicine Entry/ExpirationDate |
| Medication Generic equivalent | Medicine Entry/genericEquivalent |
| Medication Packaging | Medicine Entry/packaging |
| Active Ingredient | Medicine Entry/activeIngredient |
| Prescription Item Entry | Prescription Item Entry |
| substance Administration class Code | Prescription Item Entry/AdministrationClass/code |
| Product ID | Prescription Item Entry/product/ID |
| Product ID Qualifier | Prescription Item Entry/product/ID/qualifier |
| Dosage Instructions | Prescription Item Entry/dosage/instruction |
| Medication Quantity | Dispense Item Entry/Quantity Value |
| Days of supply | Prescription Item Entry/days supply |
| Refill number | Prescription Item Entry/Number of repeats/refills |
| Refills Authorized | Prescription Item Entry/Number of repeats/authorized |
| Partial Refill Indicator | Dispense Item Entry/partial refill/indicator |
| Method of Payment | PAYMENT SOURCES |
| Reason For Prescription | Prescription Item Entry/Reason |
| Dispensing Organization | author/assignedAuthor/representedOrganization |
| Dispenser Organization Name (Facility) | author/assignedAuthor/representedOrganization/name |
| Dispenser Organization Street Address | author/assignedAuthor/representedOrganization/addr |
| Dispenser Organization City Address | author/assignedAuthor/representedOrganization/addr |
| Dispenser Organization State Code | author/assignedAuthor/representedOrganization/addr |
| Dispenser Organization Zip Code | author/assignedAuthor/representedOrganization/addr |
| Dispenser Organization Phone Number | author/assignedAuthor/representedOrganization/telecom |
| Organization Prescriber ID Number (e.g., DEA) | author/assignedAuthor/representedOrganization/id |
| NCPDP Number | author/assignedAuthor/representedOrganization/id |
| Organization Jurisdiction Provider ID Number (e.g., NPI for the organization) | author/assignedAuthor/representedOrganization/id |

495

6.3.1.D.5 Prescription Repository Query (PRQ) Document Content Module Specification

This section specifies the header, section, and entry content modules which comprise the Prescription Repository Query (PRQ) Document Content Module, using the Template ID as the key identifier.

500

Sections that are used according to the definitions in other specifications are identified with the relevant specification document. Additional constraints on vocabulary value sets, not specifically constrained within the section template, are also identified.

505

Table 6.3.1.D.5-1: Prescription Repository Query (PRQ) Document Content Module Specification

| Template Name | | Prescription Repository Query (PRQ) | | | |
|----------------------------|------------------|--|-----------------------------|-------------------------------|------------------------------|
| Template ID | | 1.3.6.1.4.1.19376.1.7.3.1.1.30 | | | |
| Parent Template | | Community Medication List (PML) (1.3.6.1.4.1.19376.1.9.1.1.5) [PHARM] | | | |
| General Description | | Dispensed medication list will contain the prescription information for the patient’s dispensed medication that can be used to inform prescribing decisions. | | | |
| Document Code | | TBD | | | |
| Opt and Card | Condition | Header Element or Section Name | Template ID | Specification Document | Vocabulary Constraint |
| Header Elements | | | | | |
| R [1..1] | | Patient Information | 1.3.6.1.4.1.19376.1.9.1.4.1 | PHARM TF-3: 6.3.2.H | |
| R [1..1] | | Healthcare Provider Information | 1.3.6.1.4.1.19376.1.9.1.4.2 | PHARM TF-3: 6.3.2.H | |
| Sections | | | | | |
| R [1..1] | | Prescription Repository Query Medication List | 1.3.6.1.4.1.19376.1.9.1.2.5 | PHARM TF-3: 6.3.3.10.S | Constrain |

Add to Section 6.3.2 Header Content Modules

6.3.2 CDA Header Content Modules

6.3.2.H1 Patient Information Header Content Module

510

Table 6.3.2.H1-1: Prescription Repository Query (PRQ) Header

| Template Name | | Prescription Repository Patient Information | | | |
|----------------------------|--|--|-----------------|-------------------------------|------------------------------|
| Template ID | | OID | | | |
| Parent Template | | PML 1.3.6.1.4.1.19376.1.9.1.2.5 | | | |
| Header Element | | recordTarget | | | |
| General Description | | This header content module contains required and optional patient information. | | | |
| Opt and Card | Participation/ Act Relationship | Description | Template | Specification Document | Vocabulary Constraint |
| R [1..1] | | First Name | | PHARM TF-3: 6.3.2.H | |
| R [1..1] | | Family Name | | PHARM TF-3: 6.3.2.H | |
| R [1..1] | | Date of Birth | | PHARM TF-3: 6.3.2.H | |
| R [1..1] | | Gender | | PHARM TF-3: 6.3.2.H | |
| RE [0..1] | | Street Address | | PHARM TF-3: 6.3.2.H | |
| RE [0..1] | | City Address | | PHARM TF-3: 6.3.2.H | |
| RE [0..1] | | State Code | | PHARM TF-3: 6.3.2.H | |
| RE [0..1] | | Postal Code | | PHARM TF-3: 6.3.2.H | |
| RE [0..1] | | Telecom | | PHARM TF-3: 6.3.2.H | |
| R [1..1] | | Identifier | | PHARM TF-3: 6.3.2.H | |

6.3.2.H2 Healthcare Provider Information Header Content Module

Table 6.3.2.H2-1: Prescription Repository Query (PRQ) Header

| Template Name | | Prescription Repository Healthcare Provider Information | | | |
|----------------------------|--|--|-------------------------------|-------------------------------|------------------------------|
| Template ID | | OID | | | |
| Parent Template | | PML 1.3.6.1.4.1.19376.1.9.1.2.5 | | | |
| Header Element | | author | | | |
| General Description | | This header content module contains required and optional healthcare provider information (person, device and organization). | | | |
| Opt and Card | Participation/ Act Relationship | Description | Template | Specification Document | Vocabulary Constraint |
| R [1..1] | | Healthcare Provider Information - Person | 1.3.6.1.4.1.19376.1.9.1.4.2.1 | PHARM TF-3: 6.3.2.H | |
| R [1..1] | | Healthcare Provider Information - Organization | 1.3.6.1.4.1.19376.1.9.1.4.2.3 | PHARM TF-3: 6.3.2.H | |

515 **6.3.2.H3 Healthcare Provider Information - Person Header Content Module**

Table 6.3.2.H3-1: Prescription Repository Query (PRQ) Header

| Template Name | | Prescription Repository Healthcare Provider Information - Person | | | |
|----------------------------|--|---|-----------------|-------------------------------|------------------------------|
| Template ID | | OID | | | |
| Parent Template | | PML 1.3.6.1.4.1.19376.1.9.1.2.5 | | | |
| Header Element | | author | | | |
| General Description | | This header content module contains required and optional healthcare provider person information. | | | |
| Opt and Card | Participation/ Act Relationship | Description | Template | Specification Document | Vocabulary Constraint |
| R [1..1] | | Prescriber First Name | | PHARM TF-3: 6.3.2.H | |
| R [1..1] | | Prescriber Last Name | | PHARM TF-3: 6.3.2.H | |
| RE [0..1] | | Prescriber Street Address | | PHARM TF-3: 6.3.2.H | |
| RE [0..1] | | Prescriber City Address | | PHARM TF-3: 6.3.2.H | |

| | | | | | |
|--------------|--|-------------------------|--|------------------------|------------|
| R [1..1] | | Prescriber State Code | | PHARM TF-3: 6.3.2.H | |
| RE [0..1] | | Prescriber Postal Code | | PHARM TF-3: 6.3.2.H | |
| RE [0..1] | | Prescriber Specialty | | PHARM TF-3: 6.3.2.H | |
| RE [0..1] | | Prescriber Profession | | PHARM TF-3: 6.3.2.H | |
| R [1..1] | | Jurisdiction Identifier | | PHARM TF-3: 6.3.2.H | 6.3.2.H3.1 |
| R [1..1] | | Jurisdiction of License | | PHARM TF-3: 6.3.2.H | |
| O [0..1] | | Prescriber Telecom | | PHARM TF-3: 6.3.2.H | |

6.3.2.H3.1 Healthcare Provider Information - Person Header Jurisdiction Identifier Constraint

520 The ID in this element SHALL identify the prescriber using the provider identifier issued by the jurisdiction under which the provider is authorized to issue the prescription.

6.3.2.H4 Healthcare Provider Information – Organization Header Content Module

Table 6.3.2.H4-1: Prescription Repository Query (PRQ) Header

| Template Name | | Prescription Repository Healthcare Provider Information - Organization | | | |
|----------------------------|--|--|-----------------|-------------------------------|------------------------------|
| Template ID | | OID | | | |
| Parent Template | | PML 1.3.6.1.4.1.19376.1.9.1.2.5 | | | |
| Header Element | | author | | | |
| General Description | | This header content module contains required and optional healthcare provider organization information | | | |
| Opt and Card | Participation/ Act Relationship | Description | Template | Specification Document | Vocabulary Constraint |
| RE [0..1] | | HCP Organization Name | | PHARM TF-3: 6.3.2.H | 4.I.2.1.2 |
| RE [0..1] | | HCP Organization Identifier | | PHARM TF-3: 6.3.2.H | 4.I.2.1.2 |
| RE [0..1] | | HCP Organization Address | | PHARM TF-3: 6.3.2.H | 4.I.2.1.2 |

| | | | | | |
|--------------|--|--------------------------|--|------------------------|-----------|
| RE [0..1] | | HCP Organization Telecom | | PHARM TF-3: 6.3.2.H | 4.I.2.1.2 |
|--------------|--|--------------------------|--|------------------------|-----------|

6.3.3 CDA Section Content Modules

525 *Add to Section 6.3.3.10 Section Content Modules*

6.3.3.10.S1 Medication List - Section Content Module

Table 6.3.3.10.S1-1: Medication List Section

| | | | | | |
|----------------------------|------------------|--|------------------------------|-------------------------------|-------------------|
| Template Name | | Prescription Repository Medication List | | | |
| Template ID | | OID | | | |
| Parent Template | | PML 1.3.6.1.4.1.19376.1.9.1.2.5 | | | |
| General Description | | The Medication List section shall contain a description of the Medication Treatment Plan-, Prescription-, Dispense- and Medication Administration Items assembled to a medication list. It shall include zero to many Medication Treatment Plan items and/or Prescription items and/or Dispense items and/or Medication Administration Items altogether with related Pharmaceutical Advice Items. For specification of the Medication Treatment Plan-, Prescription-, Dispense-, Medication Administration- and Pharmaceutical Advice Item Entry Content Modules see Community Medication Treatment Plan (MTP), Community Prescription (PRE), Community Dispense (DIS), Community Medication Administration (CMA) and Community Pharmaceutical Advice (PADV) Profiles. | | | |
| Section Code | | 10160-0, LOINC, History of medication use | | | |
| Author | | N/A | | | |
| Informant | | N/A | | | |
| Subject | | N/A | | | |
| Opt and Card | Condition | Data Element or Section Name | Template ID | Specification Document | Constraint |
| Entries | | | | | |
| O [0..*] | | Medication Treatment Plan Item Entry Content Module | 1.3.6.1.4.1.19376.1.9.1.3.7 | PHARM MTP supplement | |
| RE [0..*] | | Prescription Item Entry Content Module | 1.3.6.1.4.1.19376.1.9.1.3.2 | PHARM PRE supplement | |
| R [1..*] | | Dispense Item Entry Content Module | 1.3.6.1.4.1.19376.1.9.1.3.4 | PHARM DIS supplement | |
| O [0..*] | | Medication Administration Item Entry Content Module | 1.3.6.1.4.1.19376.1.9.1.3.16 | PHARM CMA supplement | |
| O [0..*] | | Pharmaceutical Advice Item Entry Content Module | 1.3.6.1.4.1.19376.1.9.1.3.3 | PHARM PADV supplement | |

6.3.4 CDA Entry Content Modules

530 *Add to Section 6.3.4.E Entry Content Modules*

| Template Name | | Prescription Repository Query Prescription Item Entry | | | |
|---------------------|-------------------|---|-------------|-------------------------|-----------------------|
| Template ID | | OID | | | |
| Parent Template | | PML 1.3.6.1.4.1.19376.1.9.1.2.5 | | | |
| General Description | | | | | |
| Opt and Card | entryRelationship | Description | Template ID | Specificati on Document | Vocabulary Constraint |
| R | | Prescription Item ID | | PHARM PRE 6.3.4.2.3.4 | |
| R | | Code | | PHARM PRE 6.3.4.2.3.5 | |
| R | | Narrative Text | | PHARM PRE 6.3.4.2.3.6 | |
| RE | | Status Code | | PHARM PRE 6.3.4.2.3.7 | |
| R | | Dosage Instructions | | PHARM PRE 6.3.4.2.3.8 | |
| R | | Number of repeats/refills | | PHARM PRE 6.3.4.2.3.9 | |
| R | | Consumable | | PHARM PRE 6.3.4.2.3.10 | |
| RE | | Prescriber | | PHARM PRE 6.3.4.2.3.11 | |
| RE | | Reason | | PHARM PRE 6.3.4.2.3.13 | |
| RE | | Reference to Medication Treatment Plan Item | | PHARM PRE 6.3.4.2.3.14 | |
| O | | Reference to a related prescription activity (supply) | | PHARM PRE 6.3.4.2.3.15 | |
| O | | Patient Medication Instructions | | PHARM PRE 6.3.4.2.3.16 | |
| O | | Fulfillment Instructions | | PHARM PRE 6.3.4.2.3.17 | |
| O | | Amount of units of the consumable to dispense | | PHARM PRE 6.3.4.2.3.18 | |

IHE Quality. Research and Public Health Technical Framework Supplement – Prescription Repository Query (PRQ)

| | | | | | |
|---|--|------------------------|--|---------------------------|--|
| O | | Renewal Period | | PHARM PRE 6.3.4.2.3.19 | |
| O | | ID of parent container | | PHARM PRE 6.3.4.2.3.20 | |
| O | | Precondition Criterion | | PHARM PRE 6.3.4.2.3.21 | |

| | | | | | |
|----------------------------|--|--|--|--|--|
| Template Name | Prescription Repository Query Dispense Item Entry | | | | |
| Template ID | OID | | | | |
| Parent Template | PML 1.3.6.1.4.1.19376.1.9.1.2.5 | | | | |
| General Description | A Dispense Item belongs to one Dispensation and represents one dispensed medication. It contains the dispensed medicinal product including information such as product code, brand name and packaging information. | | | | |

| Opt and Card | entryRelationship | Description | Template ID | Specification Document | Vocabulary Constraint |
|---------------------|--------------------------|---|--------------------|-------------------------------|------------------------------|
| R | | Dispense Item ID | | PHARM DIS 6.3.4.5.3.3 | |
| RE | | Code | | PHARM DIS 6.3.4.5.3.4 | |
| R | | Narrative Text | | PHARM DIS 6.3.4.5.3.5 | |
| RE | | Repeat Number | | PHARM DIS 6.3.4.5.3.6 | |
| R | | Quantity Value | | PHARM DIS 6.3.4.5.3.7 | |
| R | | Product | | PHARM DIS 6.3.4.5.3.8 | |
| RE | | Performer | | PHARM DIS 6.3.4.5.3.9 | |
| RE | | Dispenser | | PHARM DIS 6.3.4.5.3.10 | |
| RE | | Reference to Medication Treatment Plan Item | | PHARM DIS 6.3.4.5.3.12 | |
| RE | | Reference to Prescription Item | | PHARM DIS 6.3.4.5.3.13 | |
| RE | | Reference to Pharmaceutical Advice Item | | PHARM DIS 6.3.4.5.3.14 | |
| O | | Patient Medication Instructions | | PHARM DIS 6.3.4.5.3.15 | |

| | | | | | |
|---|--|------------------------|--|---------------------------|--|
| O | | Fulfillment Notes | | PHARM DIS 6.3.4.5.3.16 | |
| O | | Dosage Instructions | | PHARM DIS 6.3.4.5.3.17 | |
| O | | ID of parent container | | PHARM DIS 6.3.4.5.3.18 | |
| O | | Substitution act | | PHARM DIS 6.3.4.5.3.19 | |

6.5 QRPH Value Sets and Concept Domains

No new value sets or concept domains.

535 6.5.x.1 FHIR Resource Bundle Content

These are the FHIR resource locations and structure definitions of the resources where the data elements are located.

| FHIR Resource location | Optionality | Cardinality | Structured Definition |
|------------------------|-------------|-------------|---|
| Patient | R | 1..1 | http://ihe.net/fhir/StructureDefinition/IHE.QRPH.PRQ.Patient |
| Practitioner | RE | 0..* | http://ihe.net/fhir/StructureDefinition/IHE.QRPH.PRQ.Practitioner |
| Organization | RE | 0..* | http://ihe.net/fhir/StructureDefinition/IHE.QRPH.PRQ.Organization |
| Medication | R | 0..* | http://ihe.net/fhir/StructureDefinition/IHE.QRPH.PRQ.Medication |
| MedicationDispense | R | 0..* | http://ihe.net/fhir/StructureDefinition/IHE.QRPH.PRQ.MedicationDispense |

540 6.6.X.1.2 FHIR Resource Data Specifications

The following table shows the mapping of the FHIR Resources supporting the content for Prescription Repository data Elements/Attributes. The Data Creator SHALL support the Resources identified by this table. The Data Consumer SHALL receive paramedicine content from the specified resource for each attribute.

545

| Prescription Repository Data Elements | FHIR Resource Location | Cardinality | Constraint |
|---------------------------------------|------------------------|-------------|------------|
| Patient First Name | Patient.name.given | 0..* | |

IHE Quality. Research and Public Health Technical Framework Supplement – Prescription Repository Query (PRQ)

| Prescription Repository Data Elements | FHIR Resource Location | Cardinality | Constraint |
|--|---|-------------|------------|
| Patient Last Name | Patient.name.family | 0..* | |
| Patient Date of Birth | Patient.birthdate | 0..1 | |
| Patient Gender | Patient.gender | 0..1 | |
| Patient Street Address | Patient.address.line | 0..* | |
| Patient City Address | Patient.address.city | 0..* | |
| Patient State Code | Patient.address.state | 0..* | |
| Patient Zip Code | Patient.address.postalCode | 0..* | |
| Patient Telecom | Patient.telecom | 0..* | |
| Patient Identifier | Patient.identifier | 0..* | |
| Prescriber First Name | Practitioner.name.given | 0..* | |
| Prescriber Last Name | Practitioner.name.family | 0..* | |
| Prescriber Street Address | Practitioner.address.line | 0..* | |
| Prescriber City Address | Practitioner.address.city | 0..* | |
| Prescriber State Code | Practitioner.address.state | 0..* | |
| Prescriber Zip Code | Practitioner.address.postalCode | 0..* | |
| Prescriber Specialty | Practitioner.qualification | 0..* | |
| Prescriber Profession | Practitioner.qualification | 0..* | |
| Prescriber ID Number (e.g., DEA for the practitioner) | Practitioner.identifier | 0..* | |
| Jurisdiction Provider ID Number (e.g., NPI for the practitioner) | Practitioner.identifier | 0..* | |
| Jurisdiction License Identifier | Practitioner.identifier | 0..* | |
| Jurisdiction of License | Practitioner.identifier | 0..* | |
| Prescriber Telecom | Practitioner.telecom | 0..* | |
| HCP Organization Name | Organization.name | 0..* | |
| HCP Organization Address | Organization.address | 0..* | |
| HCP Organization Telecom | Organization.telecom | 0..* | |
| Prescription Filled Date | MedicationDispense.whenPrepared | 0..* | |
| Prescription Written Date | MedicationDispense.authorizingPrescription.authorizedOn | 0..* | |
| Dispenser ID | MedicationDispense.performer.actor | 0..1 | |
| Dispenser Specialty | MedicationDispense.performer.function | 0..1 | |
| Dispenser Name | MedicationDispense.performer | 0..* | |
| Date of Service Event | MedicationDispense.whenHandedOver | 0..1 | |

IHE Quality. Research and Public Health Technical Framework Supplement – Prescription Repository Query (PRQ)

| Prescription Repository Data Elements | FHIR Resource Location | Cardinality | Constraint |
|--|---|-------------|------------|
| Service Event Code | MedicationDispense.type | 0..1 | |
| Prescription Number | MedicationDispense.Identifier | 0..1 | |
| Authorization | MedicationDispense.authorizingPrescription | 0..* | |
| Patient contacts | Patient.contact | 0..* | |
| Medication ID | Medication.identifier | 0..* | |
| Medication Code | Medication.code | 0..1 | |
| Medication Name | MedicationDispense.medication[x] | 0..* | |
| Medication Strength | Medication.ingredient.strength | 0..1 | |
| Medication Dosage form | Medication.form | 0..* | |
| Medication Lot number | Medication.batch.lotNumber | 0..1 | |
| Medication Expiration date | Medication.batch.expirationDate | 0..1 | |
| Medication Generic equivalent | MedicationDispense.substitution | 0..* | |
| Medication Packaging | Medication.batch | 0..1 | |
| Active Ingredient | Medication.ingredient.isActive | 0..1 | |
| substance Administration class Code | Unknowns | N/A | |
| Product ID | MedicationDispense.medicationCodeableConcept.code.value | 0..* | |
| Product Item code | MedicationDispense.medicationCodeableConcept.code.system | 0..1 | |
| Dosage Instructions | MedicationDispense.dosageInstruction | 0..* | |
| Medication Quantity | MedicationDispense.quantity | 0..1 | |
| Days of supply | MedicationDispense.daysSupply | 0..1 | |
| Refill number | Medication.request - extension | 0..1 | |
| Refills Authorized | MedicationDispense.authorizingPrescription.dispenseRequest.numberOfRepeatsAllowed | 0..1 | |
| Partial Refill Indicator | MedicationDispense.type | 0..1 | |
| Method of Payment | MedicationDispense.note | 0..1 | |
| Reason For Prescription | MedicationRequest.reasonCode | 0..* | |
| Dispenser Organization Name (Facility) | Organization.name | 0..1 | |
| Dispenser Organization Street Address | Organization.address.line | 0..1 | |
| Dispenser Organization City Address | Organization.address.city | 0..1 | |
| Dispenser Organization State Code | Organization.address.state | 0..1 | |

IHE Quality. Research and Public Health Technical Framework Supplement – Prescription Repository Query (PRQ)

| Prescription Repository Data Elements | FHIR Resource Location | Cardinality | Constraint |
|---|---------------------------------|--------------------|-------------------|
| Dispenser Organization Zip Code | Organization.address.postalCode | 0..1 | |
| Dispenser Organization Phone Number | Organization.telecom | 0..* | |
| Organization Prescriber ID Number (e.g., DEA) | Organization.identifier | 0..* | |
| NCPDP Number | Organization.identifier | 0..* | |
| Organization Jurisdiction Provider ID Number (e.g., NPI for the organization) | Organization.identifier | 0..* | |

Volume 4 – National Extensions

Add appropriate Country section

550 4 National Extensions

4.1 National Extensions for the United States

4.1.1 Comment Submission

This national extension document was authored under the sponsorship and supervision of Quality, Research and Public Health, who welcome comments on this document and the IHE USA initiative. Comments should be directed to:

http://www.ihe.net/QRPH_Public_Comments

4.1.2 Prescription Repository Query (PRQ)

This US extension references the NCPDP standard and the Prescription Drug Monitoring Program (PDMP) FHIR Implementation guide.

560

ONC ISA: <https://www.healthit.gov/isa/allows-a-prescriber-request-a-patients-medication-history-a-state-prescription-drug-monitoring>

565 The PDMP Responder SHALL Support the US Core Patient, US Core Practitioner, and US Core Organization resource profiles.

4.1.2.1 PRQ US Volume 3 Constraints

4.1.2.1.1 US Volume 3 Attribute Constraints

N/A

4.1.2.1.2 PRQ US Volume 3 Section Constraints

570 The following additional cardinality constraints apply to the Prescription Repository Query document specification and entries in Table 6.3.2.H4-1 Prescription Repository Query (PRQ) Document Content Module Specification.

Table 4.I.2.1.2-1: PCS US Section Constraints

| Cardinality | Section Element | Value Set OID | Specification Document | Vocabulary Constraint |
|--------------------|-----------------------------|----------------------|-------------------------------|------------------------------|
| O [0..1] | HCP Organization Name | | PHARM TF-3: 6.3.2.H | |
| O [0..1] | HCP Organization Identifier | | PHARM TF-3: 6.3.2.H | |
| O [0..1] | HCP Organization Address | | PHARM TF-3: 6.3.2.H | |
| O [0..1] | HCP Organization Telecom | | PHARM TF-3: 6.3.2.H | |

Note: these attributes are available by reference using the DEA number

Appendices

Appendix A – Content Module Data Element Definitions

A.1 NCPDP Request Transport Layer Document Definitions

| Data Element | Definition |
|-------------------------|---|
| XML declaration | Standard XML declaration. |
| Message | Wrapper for the entire message. Includes XML namespace declarations. |
| Header | Wrapper for the header. |
| To | Indicates the intended message recipient. |
| From | Indicates the sender of the message. Could be assigned by the PMP or an intermediary. |
| Message ID | A unique reference identifier for the transmission, generated from the sender of the request and the sender of the response. Echoed back in the response |
| Sent time | The time and date of the transmission. In the format CCYY-MM-DDThh:mm:ssZ. |
| Security | Wrapper for security information. |
| Username Token | Wrapper for User Name |
| Username | User name. |
| Sender | Wrapper for authorized sender |
| Tertiary identification | Used to identify the requesting facility or provider. |
| Receiver | Wrapper for receiver of response message |
| Tertiary identification | Used to identify where to send the response transaction |
| Test Message | Element typically included in NCPDP 10.6 standard required for header. |
| Tertiary Identifier | Used to classify the transaction as a “fill” or “medication history” request, as opposed to a “dispense” or “e-prescription”. PDMP queries are medication history requests and data in the tag should always be FIL |

A.2 NCPDP Request Body Document Definitions

| Data Element | Definition |
|------------------------|---|
| Body | Wrapper for the body. |
| Rx History Request | Wrapper for the Rx History Request |
| Patient section | Wraps patient information |
| Patient identification | Wraps patient identification |
| Social security number | Patient social security number NOTE: If SSN is not known, remove Patient Identification and SSN xml tags from request xml file. |
| Patient name | Wraps patient name |
| Last name | Patient last name |
| First name | Patient first name |
| Gender | Patient gender |

| Data Element | Definition |
|-----------------------|--|
| Date of birth | Wraps patient date of birth |
| Date [numeric date] | Patient date of birth, without time. Format=CCYY-MMDD (CC=Century YY=Year MM=Month DD=Day) |
| Address | Wraps patient address |
| Address line 1 | First line of patient's address |
| Address line 2 | Second line of patient's address. Use only if address line 1 exists. |
| City | City of patient address |
| State | State of patient address |
| Zip code | Zip code of patient address. 5 or 9 digits |
| Benefits coordination | Wraps consent information |
| Effective Date | Wraps effective date |
| Date [numeric date] | Effective date, without time. Format=CCYY-MM-DD (CC=Century YY=Year MM=Month DD=Day) |
| Expiration Date | Wraps expiration date |
| Date [numeric date] | Expiration date, without time. Format=CCYY-MM-DD (CC=Century YY=Year MM=Month DD=Day) |
| Consent | Y - Patient gave consent for prescriber to receive the medication history from any prescriber. N - Patient consent not given. P - Patient gave consent for prescriber to only receive the medication history this prescriber prescribed. X - Parental/Guardian consent on behalf of a minor for prescriber to receive the medication history from any prescriber. Z - Parental/Guardian consent on behalf of a minor for prescriber to only receive the medication history this prescriber prescribed. |

580

A.3 NCPDP Response Transport Layer Document Definitions

| Data Element | Definitions |
|-----------------------|---|
| XML declaration | Standard XML declaration. |
| Message | Wrapper for the entire message. Includes XML namespace declarations. |
| Header | Wrapper for the transport header. |
| To | Indicates the intended message recipient. |
| From | Indicates the sender of the message. |
| Message ID | A unique reference identifier for the transmission, generated from the sender of the request and the sender of the response. Echoed back in the response. |
| Relates To Message ID | A unique reference identifier for the transmission, generated from the sender of the request and the sender of the response. Echoed back in the response |
| Sent time | The time and date of the transmission. In the format CCYY-MM-DDThh:mm:ss. |

A.4 NCPDP Response Body Document Definitions

| Data Element | Definitions |
|----------------------------|---|
| Script Rx History Response | Wraps body of Response Approval/Denied |
| Response | Wraps SCRIPT request status |
| Approved | Indicates approval and wraps reference number. Only occurs if RxHistoryRequest was approved. |
| Denied | Indicates denial and wraps reference number. Only occurs if RxHistoryRequest was denied. |
| Reference number | Request reference number. Echoed back from the RxHistoryRequest. |
| Patient section | Wraps patient information |
| Patient name | Wraps patient name |
| Last name | Patient last name |
| First name | Patient first name |
| Gender | Patient gender |
| Date of birth | Wraps patient date of birth |
| Date | Patient date of birth, without time. Format=CCYY-MMDD (CC=Century YY=Year MM=Month DD=Day) |
| Address | Wraps patient address |
| Address line 1 | First line of patient's address |
| Address line 2 | Second line of patient's address. Use only if address line 1 exists. |
| City | City of patient address |
| State | State of patient address |
| Zip code | Zip code of patient address. 5 or 9 digits |
| Benefits coordination | Wraps consent information |
| Medication dispensed1 | Wraps the information for one medication dispensed. May occur up to 300 times. |
| Drug description | Description of the drug |
| Drug coding | Wraps drug coding information |
| Product code | Wraps drug coding information |
| Drug code | Drug code; type of code is qualified by the drug code qualifier. Typically an NDC code. |
| Drug quantity | Wraps drug quantity information |
| Quantity value | The numeric quantity of drug prescribed. |
| Quantity qualifier | 38 - Original Quantity 40 - Remaining Quantity 87 - Quantity Received -QS - Quantity sufficient as determined by the dispensing pharmacy. Quantity to be based on established dispensing protocols between the prescriber and pharmacy/pharmacist. CF - Compound Final Quantity |
| Unit Source Code | Unit of measure code for the given quantity value. |
| Unit Potency Code | Unit Potency Code |
| Days supply | Days supply |
| Substitutions | Substitutions |
| Written date | This wraps the date written |
| Date | Written date of prescription without the time. Format=YYYY MM DD |

IHE Quality. Research and Public Health Technical Framework Supplement – Prescription Repository Query (PRQ)

| Data Element | Definitions |
|-------------------------|---|
| Last fill date | This wraps the last fill date |
| Date | Last fill date of the prescription without the time. Format= YYYY MM DD |
| Pharmacy 2 | This wraps pharmacy information |
| Identification | This wraps pharmacy identifying information |
| Identification data | Pharmacy identifying information including NCPDP ID, DEA number |
| Pharmacy Name | Pharmacy name |
| Pharmacy Address | Address information |
| Communication Numbers | This wraps Communication Numbers |
| Communication | This wraps communication data |
| Number | Number |
| Qualifier | Qualifier |
| Prescriber information3 | This wraps Prescriber information |
| Identification | This wraps prescriber identification information |
| Identifiers | Prescriber identifiers |
| Prescriber Name | This wraps Prescriber name information |
| Prescriber Name fields | Last and first names |
| Prescriber Address | This wraps prescriber address information |
| Address fields | Address information |
| History Source | History Source Wrapper |
| Source4 | Source wrapper |
| Source qualifier | Source qualifier |
| Source Reference | Script reference wrapper |
| Reference Information | Reference information fields |
| Source Reference | Source Reference data |
| Fill number | Fill number information |

585