

Integrating the Healthcare Enterprise



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**IHE IT Infrastructure
Technical Framework Supplement**

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**Patient Identifier Cross-reference for Mobile
(PIXm)**

HL7[®] FHIR[®] Release 4

Using Resources at Normative Level

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Rev. 2.1 – Trial Implementation

20

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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 IT Infrastructure Technical Framework V16.0. 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 December 5, 2019 for trial implementation and may be available for testing at subsequent IHE Connectathons. The supplement may be amended based on the results of testing. Following successful testing it will be incorporated into the IT
35 Infrastructure Technical Framework. Comments are invited and may be submitted at [http://www.ihe.net/ITI Public Comments](http://www.ihe.net/ITI_Public_Comments).

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.

40 *Amend Section X.X by the following:*

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: <http://ihe.net>.

Information about the IHE IT Infrastructure domain can be found at [http://ihe.net/IHE Domains](http://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](http://ihe.net/IHE_Process) and <http://ihe.net/Profiles>.

50 The current version of the IHE IT Infrastructure Technical Framework can be found at [http://ihe.net/Technical Frameworks](http://ihe.net/Technical_Frameworks).

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Introduction to this Supplement

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.

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 PIXm Profile is based on Release 4 of the emerging HL7^{®1} FHIR^{®2} standard. 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>.

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

FHIR Resource Name	FMM Level
Bundle	Normative
Patient	Normative
Parameters	Normative
OperationOutcome	Normative

Given that this profile uses all Normative Resources from R4, the reference to the HL7[®] FHIR[®] standard will be to the version independent <http://hl7.org/fhir>, rather than the R4 specific <http://hl7.org/fhir/R4>.

110 The Patient Identifier Cross-reference for Mobile (PIXm) Profile defines a lightweight RESTful interface to a Patient Identifier Cross-reference Manager, leveraging technologies readily available to mobile applications and lightweight browser-based applications.

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

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

115 The functionality is based on the PIX Profile described in the ITI TF-1:5. The primary differences are transport and messaging format of messages and queries. The profile leverages HTTP transport, and the JavaScript Object Notation (JSON), Simple-XML, and Representational State Transfer (REST). The payload format is defined by the HL7[®] FHIR[®] standard. Unlike the PIX Profile, this PIXm Profile does not describe the transmission of patient identity information from a Patient Identity Source to the Patient Identifier Cross-reference Manager.

The PIXm Profile exposes the functionality of a Patient Identifier Cross-reference Manager to mobile applications and lightweight browser applications.

120 This supplement is intended to be fully compliant with the HL7[®] FHIR[®] standard, providing only use-case driven constraints to aid with interoperability, deterministic results, and compatibility with existing PIX and PIXV3 Profiles.

Open Issues and Questions

PIXm_007

125 Mobile Patient Identifier Cross-reference Query response <assigner> resource will be required, for cases where the Assigning authority is not an OID or UUID or URI

Do we want to use Assigner as an alternative field?

PIXm_010

130 Is using FHIR operations the right approach for this profile? If it is correct, did we document it properly?

PIXm_014

135 Should IHE have just used the \$match operator defined in the HL7[®] FHIR[®] standard? It seems to be very similar function. BUT \$match uses Patient resources and not just identifiers/Reference. That is to say that PIXm operation will expose identifiers but not other demographics about the patient, whereas \$match exposes the full content of the Patient resource on query and on returned result. -- <http://hl7.org/fhir/R4/patient-operation-match.html>

Thus should \$match be an alternative, or another transaction, or ignored by IHE?

PIXm_015

140 Should we simplify the Parameters given that a Reference datatype can now carry a Reference.identifier or a Reference.reference?

PIXm 016

145 Should we enhance the Parameters returned so that each business identifier (Identifier) referenced by each Patient can be enumerated. This will result in each business identifier being listed multiple times, both at the root and also once for each Patient resource containing the value in the .identifier element. This seems useful to the client, but also seems to be beyond the intended use-case for PIX, and could more appropriately be handled with PDQm, or a secondary query of the Patient. Concern is that PIXm security model covers identifiers (reference to Patient

is an identifier in FHIR), but by expanding as proposed this would be returning part of the Patient resource content.

150 **Closed Issues**

CP-ITI-1118 - asks if the return behavior is well aligned with PDQm. Seems they both should handle similar conditions similarly. → The return codes were reviewed in PIXm, and found to be appropriate for PIXm as originally documented.

155 **General Introduction**

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

Appendix A – Actor Summary Definitions

Add the following actors to the IHE Technical Frameworks General Introduction list of actors:

160 No new actors

Appendix B – Transaction Summary Definitions

Add the following transactions to the IHE Technical Frameworks General Introduction list of Transactions:

Transaction	Definition
Mobile Patient Identifier Cross-reference Query [ITI-83]	Performs a query for a cross-reference of a Patient Identity.

165 **Glossary**

Add the following glossary terms to the IHE Technical Frameworks General Introduction Glossary:

No new Glossary items or updates.

Volume 1 – Profiles

170 **Copyright Licenses**

Add the following to the IHE Technical Frameworks General Introduction Copyright section:

The FHIR License can be found at <http://hl7.org/implement/standards/fhir/license.html>.

Add the following new Section 5.5

175 **5.5 Cross Profile Considerations**

There are two other profiles, Patient Identifier Cross-reference HL7 V3 (PIXV3) and Patient Identifier Cross-reference for Mobile (PIXm), which provide similar functionality to the Patient Identifier Cross-reference Query [ITI-9] transaction.

180 A PIX Patient Identifier Cross-reference Manager may choose to group with the PIXm Patient Identifier Cross-reference Manager to provide an HTTP RESTful query method.

Add the following new Section 23.7

23.7 Cross Profile Considerations

185 There are two other profiles, (Patient Identifier Cross-reference on HL7 v2 (PIX) and (Patient Identifier Cross-reference for Mobile (PIXm), which provide similar functionality to the PIXV3 Query [ITI-45] transaction.

A PIXV3 Patient Identifier Cross-reference Manager may choose to group with the PIXm Patient Identifier Cross-reference Manager to provide an HTTP RESTful query method.

190 *Add Section 41*

41 Patient Identifier Cross-reference for Mobile Profile (PIXm)

195 The **Patient Identifier Cross-reference for Mobile Integration Profile** provides a transaction for mobile and lightweight browser-based applications to query a Patient Identifier Cross-reference Manager for a list of patient identifiers based on the patient identifier in a different domain and retrieve a patient’s cross-domain identifiers information into the application.

This profile provides a lightweight alternative to PIX Query [ITI-9] or PIXV3 Query [ITI-45] transactions, using a HTTP RESTful Query. This profile depends upon the implementation of the PMIR, PIX, or PIXV3 Profile or equivalent for the patient identity feed and update notifications. Two example groupings are shown in Section: 41.6.

200 This profile does not assume Patient Identifier Cross-reference Manager has the ability to act as a full-fledged HL7[®] FHIR[®] server, other than for the profiled transaction. PIXm can be used to provide a RESTful interface to a PIX or PIXV3 Patient Identifier Cross-reference Manager without providing other FHIR services.

41.1 PIXm Actors, Transactions, and Content Modules

205 Figure 41.1-1 shows the actors directly involved in the Patient Identifier Cross-reference for Mobile (PIXm) Profile relevant transactions between them.

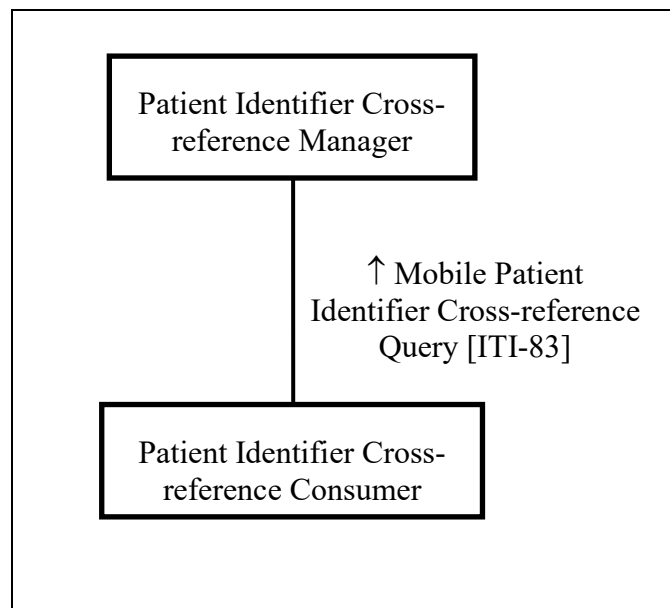


Figure 41.1-1: PIXm Actor Diagram

210 Table 41.1-1 lists the transactions for each actor directly involved in the PIXm Profile. To claim compliance with this profile, an actor shall support all required transactions (labeled “R”) and may support the optional transactions (labeled “O”).

Table 41.1-1: PIXm Profile - Actors and Transactions

Actors	Transactions	Initiator or Responder	Optionality	Reference
Patient Identifier Cross-reference Consumer	Mobile Patient Identifier Cross-Reference Query [ITI-83]	Initiator	R	ITI TF-2c: 3.83
Patient Identifier Cross-reference Manager	Mobile Patient Identifier Cross-Reference Query [ITI-83]	Responder	R	ITI TF-2c: 3.83

215 The transaction defined in this profile corresponds to the query transactions used in the PIX and PIXV3 Profiles (ITI TF-1: 5 and 23) and provides similar functionality.

Note that the Patient Master Identity Registry (PMIR) Profile contains the Mobile Patient Identity Feed [ITI-93] transaction which is equivalent to the Patient Identity Feed ([ITI-8] or [ITI-44]) or the PIX Update Notification ([ITI-10] and [ITI-46]) transactions in the PIX and PIXV3 Profiles.

41.1.1 Actor Descriptions and Actor Profile Requirements

There are no requirements beyond those in Volume 2 for the [ITI-83] transaction.

41.2 PIXm Actor Options

Options that may be selected for each actor in this profile, if any, are listed in the Table 41.2-1. Dependencies between options when applicable are specified in notes.

Table 41.2-1: PIXm Actors and Options

Actor	Option Name	Reference
Patient Identifier Cross-reference Consumer	No options defined	--
Patient Identifier Cross-reference Manager	No options defined	--

41.3 PIXm Required Actor Groupings

Table 41.3-1: PIXm - Required Actor Groupings

PIXm Actor	Actor to be grouped with	Reference	Content Bindings Reference
Patient Identifier Cross-reference Consumer	None	--	--
Patient Identifier Cross-reference Manager	None	--	--

230

41.4 PIXm Overview

235 The *Patient Identifier Cross-reference for Mobile Profile* is intended to be used by lightweight applications and mobile devices present in a broad range of healthcare enterprises (hospital, a clinic, a physician office, etc.). It supports the cross-reference query of patient identifiers from multiple Patient Identifier Domains via the following interaction:

- The ability to access the list(s) of cross-referenced patient identifiers via a query/response.

The following use case and descriptions assume familiarity with the profiles in ITI TF-1:5 and ITI TF-1:23, and only describe the RESTful actors and transaction alternatives.

240

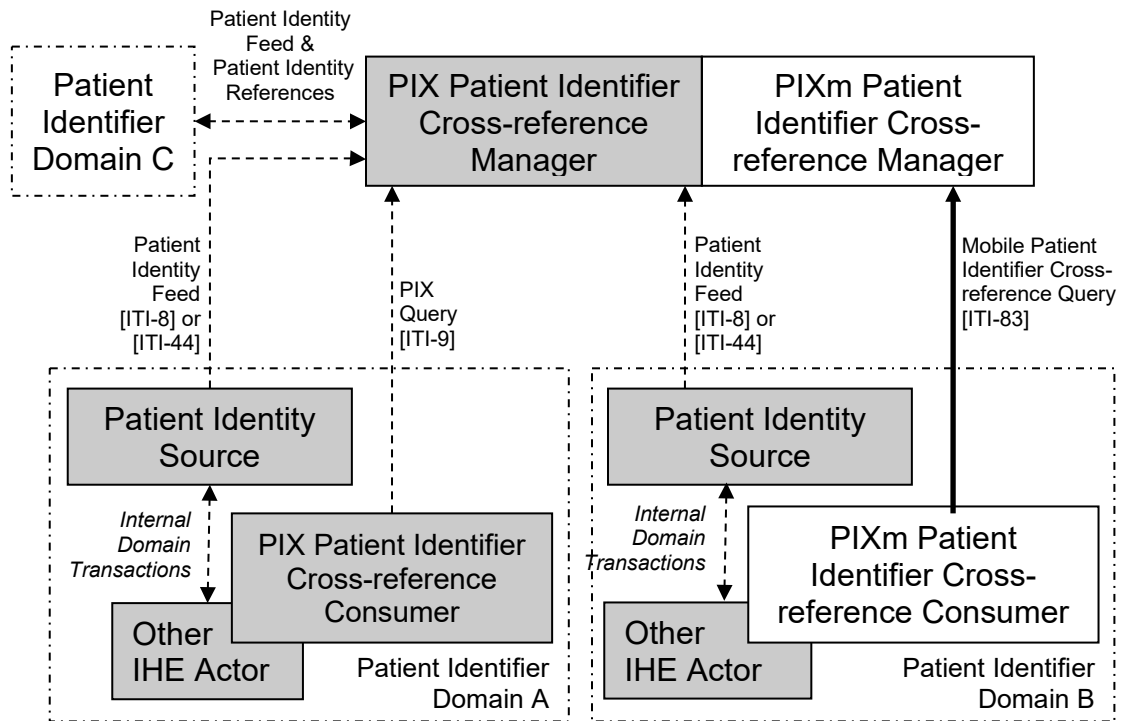


Figure 41.4-1: Process Flow with PIXm

245 This diagram shows how PIXm actors (in solid outlined, white boxes) can integrate into a PIX environment (gray boxes; described in ITI TF-1: 5.2). For a discussion of the relationship between this Integration Profile and an enterprise master patient index (eMPI) see ITI TF-1: 5.4.

41.4.1 Concepts

The Patient Identifier Cross-reference Consumer fits into the combination of actors and transactions defined for PIX, see ITI TF-1:5. It adds the alternative of using the Mobile Patient

250 Identifier Cross-reference Query [ITI-83] instead of the PIX Query [ITI-9], or PIXV3 Query [ITI-45] transactions.

The PIXm Patient Identifier Cross-reference Consumer uses a query for sets of cross-referenced patient identifiers.

41.4.2 Use Cases

255 **41.4.2.1 Use Case: Multiple Identifier Domains within a Single Facility/Enterprise**

41.4.2.1.1 Multiple Identifier Domains with a Single Facility/Enterprise Use Case Description

260 A patient is in an ambulance on his way to the hospital after an accident. The mobile Care system in the ambulance wants to get allergy information (e.g., using the MHD Profile) for the patient. The mobile Care system uses the patient’s driver’s license number ‘E-123’ as their patient ID. Before requesting the allergy information from the hospital, it must translate the known patient identity (driver’s license) to the patient’s identity known by the hospital (MRN). To achieve this correlation, the mobile Care system issues a Mobile Patient Identifier Cross-reference Query to the Patient Identifier Cross-reference Manager and retrieves the

265 corresponding patient identity. It requests a list of patient ID aliases corresponding to patient ID = ‘E-123’ (within the “mobile Care domain”) from the Patient Identifier Cross-reference Manager. Having linked this patient with a patient known by medical record number = ‘007’ in the ‘ADT Domain’, the Patient Identifier Cross-reference Manager returns this list to the mobile Care system so that it may retrieve the allergies information for the desired patient.

270 The mobile Care system can now request the allergy information from the hospital allergy system using the allergy system’s own patient ID (MRN-007) including the domain identifier/assigning authority.

275 In this scenario, the hospital’s main ADT system (acting as a Patient Identity Source) would provide a Patient Identity Feed (using the patient’s MRN as the identifier) to the Patient Identifier Cross-reference Manager. Similarly, the mobile Care system or the external assigning authority would also provide a Patient Identity Feed to the Patient Identifier Cross-reference Manager using the patient driver’s license as the patient identifier and providing its own unique identifier domain identifier.

41.4.2.1.2 Multiple Identifier Domains with a Single Facility/Enterprise Process Flow

280 The PIXm Profile is intended to provide a different transport mechanism for the cross-identifier Query functionality described in the PIX Profile. Hence, the Mobile Patient Identifier Cross-reference Query [ITI-83] transaction can be used where the PIX Query [ITI-9] (or equivalent) transaction is used. The following diagram describes only Patient Cross-Identity for Mobile

285 Process Flow.

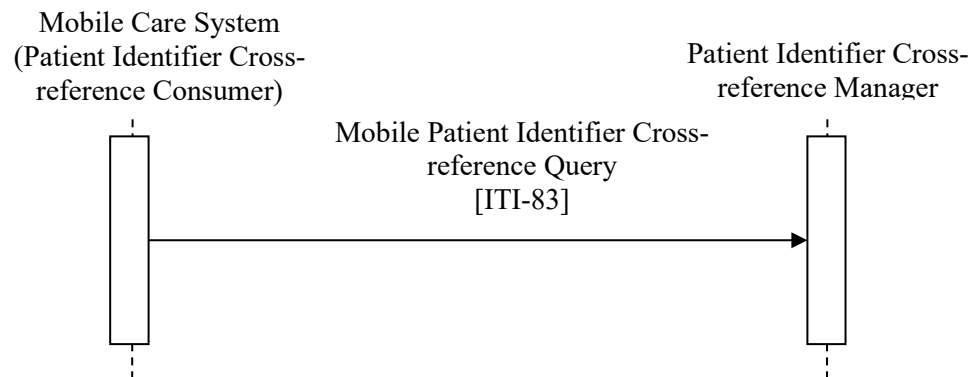


Figure 41.4.2.1.2-1: Basic Process Flow in Multiple ID Domains in a Single Facility
Process Flow in PIXm Profile

290

41.5 Security Considerations

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

41.6 PIXm Cross Profile Considerations

41.6.1 Proxy Model

295 The Patient Identifier Cross-reference Manager from PIXm can be grouped with either PIX or PIXV3 Patient Identifier Cross-reference Consumer to proxy the Mobile Patient Identifier Cross-reference Query [ITI-83] to the more traditional PIX Query [ITI-9] and PIXV3 Query [ITI-45] transactions, thus acting as a proxy to the Patient Identifier Cross-reference Manager that wants to enable RESTful query to its data.

300 41.6.2 Manager Grouping

The PIXm Profile does not define a Patient Identity Feed transaction to the Patient Identifier Cross-reference Manager, but obtaining patient identifiers is enabled using other IHE profiles, e.g.:

- 305 • The Patient Identifier Cross-reference Manager from PIXm can be grouped with a Patient Identity Consumer from the Patient Master Identity Registry (PMIR) Profile in order to receive the Mobile Patient Identity Feed [ITI-93] transaction.
- 310 • The Patient Identifier Cross-reference Manager from PIXm can be grouped with either Patient Identifier Cross-reference Manager from PIX or PIXV3 to enable the traditional IHE mechanism to obtain patient demographics for cross-referencing via Patient Identity Feed transactions [ITI-8] and/or [ITI-44].

Grouping of the PIXm Manager with these other actors is not required if the implementation is able to obtain patient identity and cross-reference information in another manner.

Volume 2c – Transactions (cont.)

Add Section 3.83

315 3.83 Mobile Patient Identifier Cross-reference Query [ITI-83]

This section corresponds to transaction [ITI-83] of the IHE IT Infrastructure Technical Framework.

3.83.1 Scope

320 This transaction is used by the Patient Identifier Cross-reference Consumer to solicit information about patients whose Patient Identifiers cross-match with Patient Identifiers provided in the query parameters of the request message. The request is received by the Patient Identifier Cross-reference Manager. The Patient Identifier Cross-reference Manager processes the request and returns a response in the form of zero or more Patient Identifiers for the matching patient.

3.83.2 Actor Roles

325 The roles in this transaction are defined in the following table and may be played by the actors shown here:

Table 3.83.2-1: Actor Roles

Actor:	Patient Identifier Cross-reference Consumer
Role:	Requests, from the Patient Identifier Cross-reference Manager, a list of patient identifiers matching the supplied Patient Identifier.
Actor:	Patient Identifier Cross-reference Manager
Role:	Returns Cross-referenced Patient Identifiers for the patient that cross-matches the Patient Identifier criteria provided by the Patient Identifier Cross-reference Consumer.

3.83.3 Referenced Standards

HL7 FHIR	HL7 [®] FHIR [®] standard http://hl7.org/fhir/index.html
----------	---

330 3.83.4 Messages

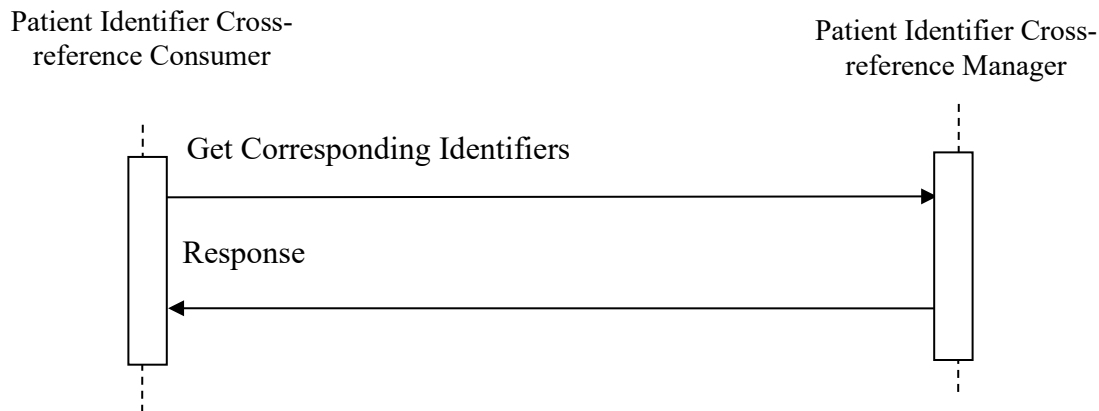


Figure 3.83.4-1: Interaction Diagram

3.83.4.1 Get Corresponding Identifiers message

335 This message is implemented as an HTTP GET operation from the Patient Identifier Cross-reference Consumer to the Patient Identifier Cross-reference Manager using the FHIR `$ihe-pix` operation described in Section 3.83.4.1.2 Message Semantics.

3.83.4.1.1 Trigger Events

A Patient Identifier Cross-reference Consumer needs to obtain, or determine the existence of, alternate patient identifiers.

340 3.83.4.1.2 Message Semantics

The Get Corresponding Identifiers message is a FHIR operation request as defined in FHIR (<http://hl7.org/fhir/operations.html>) with the input parameters shown in Table 3.83.4.1.2-1. Given that the parameters are not complex types, the HTTP GET operation shall be used as defined in FHIR (<http://hl7.org/fhir/operations.html#request>).

345 The name of the operation is `$ihe-pix`, and it is applied to FHIR Patient Resource type.

The Get Corresponding Identifiers message is conducted by the Patient Identifier Cross-reference Consumer by executing an HTTP GET against the Patient Identifier Cross-reference Manager's Patient Resource URL.

The URL for this operation is: `[base]/Patient/$ihe-pix`

350 Where **[base]** is the URL of Patient Identifier Cross-reference Manager Service provider.

The Get Corresponding Identifiers message is performed by an HTTP GET command shown below:

355

```
GET [base]/Patient/$ihe-pix?sourceIdentifier=[token]{&targetSystem=[uri]}{&_format=[token]}
```

Table 3.83.4.1.2-1: \$ihe-pix Message HTTP query Parameters

Query parameter Name	Cardinality	Search Type	Description
Input Parameters			
sourceIdentifier	[1..1]	token	The Patient identifier search parameter that will be used by the Patient Identifier Cross-reference Manager to find cross matching identifiers associated with the Patient Resource. See Section 3.83.4.1.2.1.
targetSystem	[0..*]	uri	The Assigning Authorities for the Patient Identity Domains from which the returned identifiers shall be selected. See Section 3.83.4.1.2.2.
_format	[0..1]	token	The requested format of the response from the mime-type value set. See ITI TF-2x: Appendix Z.6

3.83.4.1.2.1 Source Patient Identifier Parameter

360 The required HTTP query parameter `sourceIdentifier` is a `token` that specifies an identifier associated with the patient whose information is being queried (e.g., a local identifier, account identifier, etc.). Its value shall include both the Patient Identity Domain (i.e., Assigning Authority) and the identifier value, separated by a "|".

See ITI TF-2x: Appendix Z.2.2 for use of the `token` search parameter type for patient identifiers.

365 The Patient Identifier Cross-reference Consumer shall provide exactly one (1) instance of this parameter in the query.

For example, a query searching for all patient Identifiers, for a patient with identifier NA5404 assigned by authority “1.3.6.1.4.1.21367.2010.1.2.300&ISO” would be represented as:

```
sourceIdentifier=urn:oid:1.3.6.1.4.1.21367.2010.1.2.300|NA5404
```

3.83.4.1.2.2 Requesting Patient Identity Domains to be Returned

370 If the Patient Identifier Cross-reference Consumer wishes to select the Patient Identity Domain(s) from to receive Patient Identifiers, it does so by populating the `targetSystem` parameter with as many domains for which it wants to receive Patient Identifiers. The Patient Identifier Cross-reference Manager shall return the Patient Identifiers for each requested domain if a value is known.

375 The `targetSystem` parameter uses this format:

```
targetSystem=<patient ID Assigning Authority domain>
```

Examples:

```
targetSystem=urn:oid:1.3.6.1.4.1.21367.2010.1.2.100
```

```
targetSystem=http://fhir.mydomain.com
```

380 3.83.4.1.3 Expected Actions

The Patient Identifier Cross-reference Manager shall use the `sourceIdentifier` and the `targetSystem(s)` to determine the Patient Identities that match, where Patient Identities include business Identifier(s) and FHIR Patient Resource(s).

Response returned encoding and semantics is defined in Section 3.83.4.2:

385 The Patient Identities returned may be a subset based on policies that might restrict access to some Patient Identities. For guidance on handling Access Denied, see ITI TF-2x: Appendix Z.7.

3.83.4.2 Response message

3.83.4.2.1 Trigger Events

390 The Patient Identifier Cross-reference Manager needs to return failure, or success with zero to many results to the Patient Identifier Cross-reference Consumer.

3.83.4.2.2 Message Semantics

See ITI TF-2x: Appendix Z.6 for more details on response format handling.

The response message is a FHIR operation response

(<http://hl7.org/fhir/operations.html#response>)

395 On Failure, the response message is an HTTP status code of 4xx or 5xx indicates an error, and an `OperationOutcome` Resource shall be returned with details. See specific failure modes in Sections 3.83.4.2.2.2 through 3.83.4.2.2.4.

3.83.4.2.2.1 Success

400 On Success, the response message is an HTTP status code of 200 with a single `Parameters` Resource as shown in Table 3.83.4.2.2-1. For each matching business Identifier, the `Parameters` Resource shall include one `parameter` element with `name="targetIdentifier"`. For each matching Patient Resource, the `Parameters` Resource shall include one `parameter` element with `name="targetId"`. The values may be returned in any order. The identifier value given in the `sourceIdentifier` parameter in the query shall not be included in the returned Response.

405

Table 3.83.4.2.2.1-1: \$ihe-pix Message Response

Parameter	Card.	Data Type	Description
FHIR Parameters Resource			
targetIdentifier	[0..*]	Identifier	The identifier found. Shall include the assigning authority as specified in ITI TF-2x: Appendix E.3
targetId	[0..*]	Reference(Patient)	The URL of the Patient Resource

```

410 <Parameters xmlns="http://hl7.org/fhir">
    <parameter>
        <name value="targetIdentifier"/>
        <valueIdentifier>
            <use value="official" />
            <system value="urn:oid:2.16.840.1.113883.16.4.3.2.5" />
415         <value value="123" />
        </valueIdentifier>
    </parameter>
    <parameter>
        <name value="targetIdentifier"/>
420     <valueIdentifier>
        <use value="official" />
        <system value="urn:oid:1.16.7435.2.315381.13.4.1.2.3" />
        <value value="474" />
        </valueIdentifier>
    </parameter>
    <parameter>
425     <name value="targetId"/>
        <valueReference value="http://xyz-server/xxx/Patient/7536642">
        </valueReference>
    </parameter>
430 <parameter>
        <name value="targetIdentifier"/>
        <valueIdentifier>
            <use value="official"/>
            <system value="http://www.acmehosp.com/patients"/>
435         <value value="44552"/>
            <period>
                <start value="2003-05-03"/>
            </period>
        </valueIdentifier>
    </parameter>
    <parameter>
440     <name value="targetId"/>
        <valueReference value="http://pas-server/xxx/Patient/443556">
        </valueReference>
    </parameter>
445 </Parameters>

```

450

3.83.4.2.2 Source Identifier not found

When the Patient Identifier Cross-reference Manager recognizes the Patient Identity Domain in the `sourceIdentifier` but the `identifier` is not found, then the following failure shall be returned:

455 **HTTP 404** (Not Found) is returned as the HTTP status code.

An `OperationOutcome` Resource is returned indicating that the patient identifier is not recognized in an `issue` having:

Attribute	Value
severity	error
code	http://hl7.org/fhir/issue-type#not-found
diagnostics	“sourceIdentifier Patient Identifier not found”

460 3.83.4.2.2.3 Source Domain not recognized

When the Patient Identifier Cross-reference Manager does not recognize the Patient Identity Domain in the `sourceIdentifier`, then the following failure shall be returned:

HTTP 400 (Bad Request) is returned as the HTTP status code.

465 An `OperationOutcome` Resource is returned indicating that the Patient Assigning Authority domain is not recognized in an `issue` having:

Attribute	Value
severity	error
code	http://hl7.org/fhir/issue-type#code-invalid
diagnostics	“sourceIdentifier Assigning Authority not found”

3.83.4.2.2.4 Target Domain not recognized

470 When the Patient Identifier Cross-reference Manager does not recognize the Patient Identity Domain in the `targetSystem`, then the following failure shall be returned:

HTTP 403 (Forbidden) is returned as the HTTP status code.

An `OperationOutcome` Resource is returned indicating that the Patient Identity Domain is not recognized in an `issue` having:

Attribute	Value
severity	error
code	http://hl7.org/fhir/issue-type#code-invalid
diagnostics	“targetSystem not found”

475

3.83.5 Security Considerations

See the general Security Consideration in ITI TF-1: 38.5

3.83.5.1 Security Audit Considerations

480 The Security audit criteria are similar to those for the PIX Query [ITI-9] as this transaction discloses the same type of patient information. The Mobile Patient Identifier Cross-reference Query is a Query Information event as defined in ITI TF-2a: Table 3.20.4.1.1.1-1. The audit message shall comply with the requirements in ITI TF-2a: 3.9.5.1, with the following differences:

- 485 • EventTypeCode = EV(“ITI-83”, “IHE Transactions”, “Mobile Patient Identifier Cross-reference Query”)
- Query Parameters (AuditMessage/ParticipantObjectIdentification)
 - ParticipantObjectIdTypeCode = EV(“ITI-83”, “IHE Transactions”, “Mobile Patient Identifier Cross-reference Query”)
 - ParticipantObjectQuery = Requested URL including query parameters
 - 490 ○ ParticipantObjectDetail = HTTP Request Headers contained in the query (e.g., Accept header)