Integrating the Healthcare Enterprise

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IHE IT Infrastructure (ITI) Technical Framework Supplement 2009-2010

10

Pediatric Demographics

15

Trial Implementation Supplement

August 10, 2009

20 ## <u>**Contents**</u>

Foreword

Integrating the Healthcare Enterprise (IHE) is an initiative designed to stimulate the integration of the information systems that support modern healthcare institutions. Its fundamental objective
50   is to ensure that in the care of patients all required information for medical decisions is both correct and available to healthcare professionals. The IHE initiative is both a process and a forum for encouraging integration efforts. It defines a technical framework for the implementation of established messaging standards to achieve specific clinical goals. It includes a rigorous testing process for the implementation of this framework. And it organizes
55   educational sessions and exhibits at major meetings of medical professionals to demonstrate the benefits of this framework and encourage its adoption by industry and users.

The approach employed in the IHE initiative is not to define new integration standards, but rather to support the use of existing standards, HL7, DICOM, IETF, and others, as appropriate in their respective domains in an integrated manner, defining configuration choices when necessary.
60   IHE maintain formal relationships with several standards bodies including HL7, DICOM and refers recommendations to them when clarifications or extensions to existing standards are necessary.

This initiative has numerous sponsors and supporting organizations in different medical specialty domains and geographical regions. In North America the primary sponsors are the Healthcare
65   Information and Management Systems Society (HIMSS) and the Radiological Society of North America (RSNA). IHE Canada has also been formed. IHE Europe (IHE-EUR) is supported by a large coalition of organizations including the European Association of Radiology (EAR) and European Congress of Radiologists (ECR), the Coordination Committee of the Radiological and Electromedical Industries (COCIR), Deutsche Röntgengesellschaft (DRG), the EuroPACS
70   Association, Groupement pour la Modernisation du Système d'Information Hospitalier (GMSIH), Société Francaise de Radiologie (SFR), Società Italiana di Radiologia Medica (SIRM), the European Institute for health Records (EuroRec), and the European Society of Cardiology (ESC). In Japan IHE-J is sponsored by the Ministry of Economy, Trade, and Industry (METI); the Ministry of Health, Labor, and Welfare; and MEDIS-DC; cooperating
75   organizations include the Japan Industries Association of Radiological Systems (JIRA), the Japan Association of Healthcare Information Systems Industry (JAHIS), Japan Radiological Society (JRS), Japan Society of Radiological Technology (JSRT), and the Japan Association of Medical Informatics (JAMI). Other organizations representing healthcare professionals are invited to join in the expansion of the IHE process across disciplinary and geographic
80   boundaries.

The IHE Technical Frameworks for the various domains (IT Infrastructure, Cardiology, Laboratory, Radiology, etc.) defines specific implementations of established standards to achieve integration goals that promote appropriate sharing of medical information to support optimal patient care. It is expanded annually, after a period of public review, and maintained regularly
85   through the identification and correction of errata. The current version for these Technical Frameworks may be found at www.ihe.net/Technical_Framework.

The IHE Technical Framework identifies a subset of the functional components of the healthcare enterprise, called IHE Actors, and specifies their interactions in terms of a set of coordinated, standards-based transactions. It describes this body of transactions in progressively greater

90   depth. Volume I provides a high-level view of IHE functionality, showing the transactions organized into functional units called Integration Profiles that highlight their capacity to address specific clinical needs. The subsequent volumes provide detailed technical descriptions of each IHE transaction.

This IHE IT Infrastructure Technical Framework Supplement is issued for Trial Implementation
95   through May 2010.

Comments and change proposals arising from Trial Implementation may be submitted to http://forums.rsna.org under the forum:

"Integrating the Healthcare Enterprise"

100   **Select the sub-forum:**

"IHE IT Infrastructure 2009-2010 Supplements for Trial Implementation"

The IHE IT Infrastructure Technical Committee will address these comments resulting from implementation, Connectathon testing, and demonstrations such as at HIMSS 2010..

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1 Introduction

The experience of immunization registries and other public health population databases has shown that matching and linking patient records from different sources for the same individual
110 person in environments with large proportions of pediatric records requires additional demographic data.

In particular, distinguishing records for children who are twins, triplets, etc. – that is, avoiding false positive matches - may be difficult because much of the demographic data for the two individuals matches. For instance, twin children may have identical last names, parents,
115 addresses, and dates of birth; their first names may be very similar, possibly differing by only one letter. It can be very difficult for a computer or even a human being to determine in this situation whether the slight first name difference points to two distinct individuals or just a typographical error in one of the records. Additional information is extremely helpful in making this determination. Furthermore, additional information such as information about the mother of
120 the patient or a household telephone number is also helpful in matching records in large population databases where data quality may be uneven. Pediatric Demographics makes use of the following six additional demographic fields to aid record matching in databases with many pediatric records.

Field	Reason for inclusion	Value
Mother's Maiden Name	Any information about the mother is helpful in making a match	Helps create true positive matches
Patient Home Telephone	A telecom helps match into the right household	Helps create true positive matches
Patient Multiple Birth Indicator	Indicates this person is a multiple - twin, triplet, etc.	Helps avoid false positive matches of multiples
Patient Birth Order	Distinguishes among those multiples.	Helps avoid false positive matches of multiples
Last Update Date/Time, Last Update Facility	These fields, although not strictly demographic, can effectively substitute when multiple birth indicator and birth order are not collected. They indirectly provide visit information. Provider visits on the same day may likely indicate two children brought to a doctor together.	Helps avoid false positive matches of multiples

125 Pediatric Demographics applies to PIX and PDQ, including HL7 Version 3 supplements for both. Since, altogether, Pediatric Demographics applies to four profiles (PIX, PDQ, PIXV3 and PDQV3) using transactions spanning three HL7 versions – V2.3, V2.5 and V3.0 - the above-described fields are used in slightly different ways in different places within the profiles and transactions. Overall, the approach taken in this supplement is to describe the spirit of how the

130   fields are to be used in Volume 1 profiles, and to specify their use within each Volume 2 transaction in a way that is appropriate to the HL7 version used and the way the transaction is already written.

      1. In the Patient Identity Management [ITI-30] transaction, all six fields are sent by the Patient Identity Source and used by the Cross-Reference Manager to match the incoming
135   record against known records.

      2. In Patient Demographics Query [ITI-21], some fields are sent by the Consumer and used by the Supplier to match the request against known records.

      3. In Patient Demographics Query [ITI-21], all six are returned in the response to allow a user attending a request by a Consumer to pick from among the returned possible
140   matches.

      4. In addition, in HL7 Version 3, the last two fields are treated as Control Act Wrapper fields rather than demographic fields.

All six fields are useful in pediatric record matching. Patient Identity Management [ITI-30] is an "unsolicited update", or "notification" from the source of information (Patient Identity
145 Source) to the Cross-Reference Manager. Record matching is completed within this transaction; thus, it is important to supply all six fields (when available) in a Patient Identity Management [ITI-30].

In a query model, matching may occur in several steps. A query can retrieve a number of candidate matches, from which, by some mechanism not specified here, a single match may be
150 chosen. A second query may then retrieve further data for this single, identified patient. The returned data may be put to a variety of uses, including validation of the identifier cross-referencing, generation of a Patient Identity Management [ITI-30] to another system, or other uses. The use to which returned data is put is out of scope to this supplement.

Thus, some of the Pediatric Demographics fields are more useful as search criteria in finding
155 candidate matches (as in Patient Demographics Query), but all are important as part of the values returned (as facilitated by Patient Demographics Query Response).

The optionality of Pediatric Demographics fields in various transactions reflects this. Optionality of Pediatric Demographics fields, and of select other field, in Patient Identity Management [ITI-30], Patient Demographics Query [ITI-21], and Patient Demographics Query
160 Response [ITI-21] is given below:

Transaction	Patient Identity Management [ITI-30] with Pediatric Demographics		Patient Demographics Query [ITI-21]		
Actor	Patient Identity Source (per HL7 2.5 standard)	Patient Identifier Cross-Reference Manager	Patient Demographics Consumer	Patient Demographics Supplier	Patient Demographics Supplier - Response
Pediatric Demographics fields:					
Mother's Maiden Name	O	R2	may supply	shall support	R2
Patient Home Telephone	O	R2	may supply	shall support	R2
Patient Multiple Birth Indicator	O	R2	may supply	shall support	R2
Patient Birth Order	O	R2	may supply	shall support	R2
Last Update Date/Time	O	R2	may supply	shall support	R2
Last Update Facility	O	R2	may supply	shall support	R2
Select other fields:					
Patient Identifier List	R	R	may supply	shall support	R
Patient Name	R	R	may supply	shall support	R
Date/Time of Birth	O	R+	may supply	shall support	R2
Administrative Sex	O	R+	may supply	shall support	R2
Patient Address	O	R2	may supply	shall support	R2
Patient Account Number	O	O	may supply	shall support	R2

6

165   Pediatric Demographics adds a new transaction to PIX. Since the Pediatric Demographics fields require at least HL7 Version 2.5, Patient Identity Management [ITI-30] is added to PIX and used by Pediatric Demographics in addition to Patient Identity Feed [ITI-8].   Thus, this option has the effect of adding an HL7 V2.5 option to PIX.

       Pediatric Demographics incorporates the language of Change Proposals 277 and 309, clarifying
170   the use of search fields by PDQ, and renaming ITI-30 as "Patient Identity Management" to distinguish it from ITI-8 "Patient Identity Feed".

1.1 Open Issues and Questions

1.   Use of Last Update Date/Time and Last Update Facility for matching algorithm purposes is a bit oblique. While these fields appear in HL7 Version 2.5 in the PID
175   segment, in HL7 Version 3, these are not treated as demographic fields but appear in the Control Act Wrapper. Is their treatment as described here really appropriate? They have proven field value in discriminating records for individuals who are related by multiple birth (see Closed Issues below), but in newer systems deploying HL7 Version 3 perhaps visit information could be used, or it could be assumed that Multiple Birth
180   Indicator/Birth Order would be more commonly available? We seek public comment. Note that we are not proposing to use these fields as query parameters, but only for back-end matching purposes.

2.   The need to include pediatric demographic field values in the Patient Identity Feed and Patient Demographics Query Response transactions in Version 3 is described in
185   Volume 1 changes. Is this enough to specify to the reader which V3 fields need to be sent? Since V3 constraining allows field repetitions to be removed but not added, we did not know of a clean way to specify a change from "optional" to "required if available" in the V3 supplement text.

1.2 Closed Issues

190   1.   The final list of fields has been reduced to the following six. Other fields were eliminated when we examined the cost vs. benefit of implementing them. Father's name, Father's SSN, Mother's name and Mother's SSN require NK1 segments to be used in V2.5. Although present in ITI-30, these segments are not called out or described in the transaction specifically. It is therefore safe to assume that implementers currently
195   complying with PIX, PDQ and ITI-30 may not parse these segments. Most of the benefit of these fields can be found in the Mother's name. Since Mother's Maiden is in the PID segment in V2.5 currently and can contain first, middle and last names, we felt that most of the benefit of these other four can be captured by Mother's Maiden, at much less potential cost to implementers. We felt this approach had a much greater
200   likelihood of uptake. Another original field, Birth State, has more to do with finding information across state lines than identification of a single patient. Thus it was felt that this is more like location information than demographic information. It is also possible that the inclusion of Birth State in the first place is more for providing an assigning authority for Birth Registration Number. Discussion of Birth Registration Number has
205   been added..

- Patient Home Telephone - used to get into the right household for the patient

- Patient Multiple Birth Indicator - used to distinguish records for twins. For children, often records for twins have similar demographics, which can result in a false match.

210

- Patient Birth Order - used to distinguish records for twins.

- Last Update Date/Time - used to distinguish records for twins. Last Update fields add value when multiple birth indicator and birth order are unavailable. Last Update fields substitute for visit information. Twins are usually brought for doctor visits to the same place on the same day but records are stamped with

215   different times (at the same facility-see below). This a very special type of oblique matching, where a match with two different first names, but the same day and location of visits, are likely multiples, and should not be matched.

- Last Update Facility - used to distinguish records for twins. See discussion of Last Update Date/Time above.

220

- Mother's Maiden Name - For a child, mother's name provides high quality matching data. First name is as useful as last name (what is usually thought of as maiden name).

2.   We decided to allow email in the V3 PatientTelecom field (Patient Home Telephone).

3.   In the IHE May ITI Face-to-Face, three alternative approaches to resolving HL7 V2-V3
225   differences in support for PDQ query fields were identified:

- Revisit HL7 V3 RMIM to allow more fields in order to match the HL7 V2 capabilities

- Drop some fields from V2 query requirement to align on the HL7 V3 capabilities.

- Slightly different solutions appropriate to different technologies

230   4.   This Public Comment version takes the latter approach to support the broadest set of capabilities possible given the underlying standards constraints. Appropriate changes to Volume 1 and Volume 2 were made to reflect this.

5.   A corollary issue was whether to have a conformance requirement (option) on the Patient Demographics Consumer implementation to be able to support some means for
235   the user to enter the two search fields in a Patient Demographics Query. We decided to remove this option, but there were dissenting opinions. We ask for public comment on this issue. As a result of the public comment process, the conformance requirement on Patient Demographics Query has been reinserted in this draft.

6.   We discussed HITSP requirements to include National Vaccine Advisory Committee (
240   NVAC) required and optional fields and AIRA codesets. We decided to forward both the PCC Immunization Content Profile as well as the Pediatric Demographics Supplement to HITSP. The former defines data for exchange (tracking).

The alternative proposal was to include at least all NVAC required fields in Pediatric Demographics. This would mean adding Patient Birth State and Mother's Last Name
245   back in to Pediatric Demographics. In the end, it seemed unreasonable to ask

implementers to add fields to matching algorithms for which a case in matching can't be clearly made.

The resolution was to cover the required and optional NVAC fields between the two IHE profiles. The IHE documents were forwarded for public comment to the HITSP Population Health Technical Committee in June for further comment.

7. Issues regarding the use of the birth certificate number are complex.

- Birth certificate number- is included as an identifier in PDO but sender does not have to send it and receiver does not have to use it
- It is already on the original list of PIX/PDQ fields (part of the PID segment/identifier list)
- Already a formatted field in common usage
- May or may not be sharable within a jurisdiction or beyond
- If available and sharable may be exchanged
- There is no table number index for the state codes- no OID for state authority
- IIS is not the only pediatric record which may use birth certificate for matching.
- Newborn screening and early hearing detection programs use the birth certificate for matching in the hospital.

Birth Certificate is called out as an identifier commonly used in the PID segment by ITI-30. It is recommended that OIDs be issued for the assigning authorities before using Birth Certificate Number as an identifier for patient records.

Volume I – Integration Profiles

This section describes the changes required in Volume I of the Technical Framework that result form including this Integration Profile.

270 ## History of Annual Changes

*Add the following bullet to the end of the bullet list in Section 1.7*

- **Added Pediatric Demographics to PIX, PDQ, PIXV3, PDQV3**

2.2.1 PIX Integration Profile Changes

Update TF Vol. 1 Section 5.1 line 943 to replace figure 5.1-1 with the following:

275 ## 5.1 Actors/Transactions

Figure 5.1-1 shows the actors directly involved in the Patient Identifier Cross-referencing Integration Profile and the relevant transactions between them. Other actors that may be indirectly involved due to their participation in other related profiles are not shown.
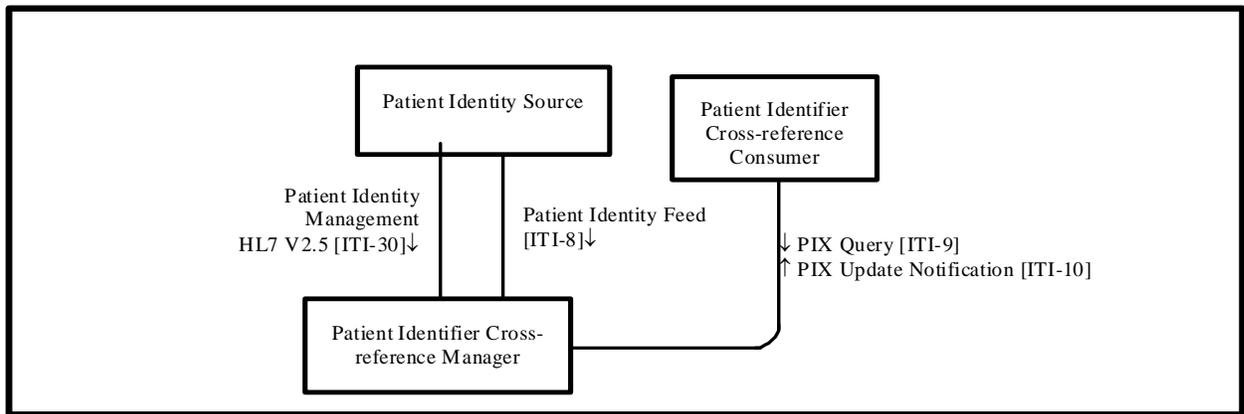
280

Figure 5.1-1 Patient Identifier Cross-referencing Actor Diagram

Table 5.1-1 lists the transactions for each actor directly involved in the Patient Identifier Cross-referencing Profile. In order to claim support of this Integration Profile, an implementation must perform the required transactions (labeled "R"). Transactions labeled "O" are optional. A
285 complete list of options defined by this Integration Profile and that implementations may choose to support is listed in the ITI TF-1: 5.2.

Update TF Vol. 1 Section 5.1 Table 5.1-1 line 953 as follows:

290 **Table 5.1-1 Patient Identifier Cross-referencing Integration for MPI (PIX) Profile – Actors and Transactions**

Actors	Transactions	Optionality	Section in Volume 2
Patient Identity Source	Patient Identity Feed[ITI-8]	R	ITI TF-2a: 3.8
	Patient Identity Management [ITI-30]	**O**	**ITI TF-2b: 3.30**
Patient Identifier Cross-reference Consumer	PIX Query [ITI-9]	R	ITI TF-2a: 3.9
	PIX Update Notification [ITI-10]	O	ITI TF-2a: 3.10
Patient Identifier Cross-reference Manager	Patient Identity Feed [ITI-8]	R	ITI TF-2a: 3.8
	Patient Identity Management [ITI-30]	**O**	**ITI TF-2b: 3.30**
	PIX Query [ITI-9]	R	ITI TF-2a: 3.9
	PIX Update Notification [ITI-10]	R	ITI TF-2a: 3.10

Update TF Vol. 1 Section 5.2 PIX Profile Options line 955 as follows:

5.2 Patient Identifier Cross-referencing Integration Profile Options

295 Options that may be selected for this Integration Profile are listed in the Table 5.2-1 along with the Actors to which they apply. Dependencies between options when applicable are specified in notes.

Table 5.2-1 Patient Identifier Cross-referencing – Actors and Options

Actor	Options	Vol & Section
Patient Identity Source	~~No options defined~~ **Pediatric Demographics**	—— **ITI TF-1: 5.2.1**
Patient Identifier Cross-reference Manager	~~No options defined~~ **Pediatric Demographics**	— **ITI TF-1: 5.2.1**
Patient Identifier Cross-reference Consumer	PIX Update Notification	ITI TF-2a: 3.10

300 *Create new section TF Vol. 1 Section 5.2.1 PIX Profile Options line 958 as follows:*

5.2.1 Pediatric Demographics

The experience of immunization registries and other public health population databases has shown that matching and linking patient records from different sources for the same individual person in environments with large proportions of pediatric records requires additional
305 demographic data.

In particular, distinguishing records for children who are twins, triplets, etc. – that is, avoiding false positive matches - may be difficult because much of the demographic data for the two individuals matches. For instance, twin children may have identical last names, parents, addresses, and dates of birth; their first names may be very similar, possibly differing by only
310 one letter. It can be very difficult for a computer or even a human being to determine in this

situation whether the slight first name difference points to two distinct individuals or just a typographical error in one of the records.   Additional information is extremely helpful in making this determination.

Pediatric Demographics makes use of the following six additional demographic fields to aid record matching in databases with many pediatric records.

Field	Reason for inclusion	Value
Mother's Maiden Name	Any information about the mother is helpful in making a match	Helps create true positive matches
Patient Home Telephone	A telecom helps match into the right household	Helps create true positive matches
Patient Multiple Birth Indicator	Indicates this person is a multiple - twin, triplet, etc.	Helps avoid false positive matches of multiples
Patient Birth Order	Distinguishes among those multiples.	Helps avoid false positive matches of multiples
Last Update Date/Time, Last Update Facility	These fields, although not strictly demographic, can effectively substitute when multiple birth indicator and birth order are not collected. They indirectly provide visit information. Provider visits on the same day may likely indicate two children brought to a doctor together.	Helps avoid false positive matches of multiples

Patient Identity Source actors which support the Pediatric Demographics option are required to support the Patient Identity Management [ITI-30] transaction and shall provide values, when available, for the fields identified as Pediatric Demographics fields.

Patient Identifier Cross-reference Manager actors which support the Pediatric Demographics option are required to support the Patient Identity Management [ITI-30] transaction, and if values for one or more of the Pediatric Demographics fields are specified in the Patient Identity Management [ITI-30], they shall be considered as part of the matching algorithm of the PIX Manager.

Pediatric Demographics are defined as all of the following:

- Mother's Maiden Name
- Patient Home Telephone
- Patient Multiple Birth Indicator
- Patient Birth Order
- Last Update Date/Time
- Last Update Facility

Pediatric Demographic is particularly focused on two data issues:

- Locating a record where the data or the search criterion have differences, but both the data record and the search criterion represent the same person, and

335
- Avoiding improper linkage of very similar records that do not belong to the same person. This problem is most often encountered in multiple birth situations where twins may be given extremely similar names**.**

Create new section TF Vol. 1 Section 5.3.3 Pediatric Demographics Use Cases line 1028 as follows:

340 ## 5.3.3 Pediatric Demographic Option Use Cases

The following sections describe use cases that the Pediatric Demographics option addresses.

5.3.3.1 Use Case: High Quality Demographic Feed from a Birth Registry

A regional Immunization Information System (IIS) receives birth registry information about a pair of twins. These twins are named "Lalainne" and "Lalannie" Smith. All of the data elements
345 in the received registration are populated, and they are all identical, except for the Given Name, the Birth Order, and the Birth Certificate #. The IIS cross-referencing system can clearly identify this very similar data as belonging to two separate individuals, because they are both flagged as having been part of a Multiple Birth, their Birth Order numbers are different, and their Birth Certificate #s are different.

350 ### 5.3.3.2 Use Case: Normal Demographic Feed from a Point of Care

A couple years later, the mother of these two twins, who has now divorced and remarried, takes them to Pediatric Healthcare, where they get the immunizations appropriate for 2 year olds. Pediatric Healthcare completes a registration for each of them, and submits the resulting data to the IIS. This data has their new Family Name as "Gomez," but the clerks had appropriately
355 recorded the Birth Order of each twin. Again, the IIS was able to distinguish the two registration records as belonging to separate individuals, and it was able to match them up to their earlier records because the mother's Maiden Name was present in both the earlier records and the records submitted from Pediatric Healthcare. Pediatric Healthcare was able to download the full immunization history of each twin.

360 ### 5.3.3.3 Use Case: Minimal Demographic Feed from a Health Fair

The Jackson County Health Department puts on an annual Health Fair in a shopping mall every August, partly to screen school age children for the minimum shots required for admission to the first grade. Mrs. Gomez is now working to pay for her new apartment, but her sister-in-law takes the children to the Health Fair where they are given shots based on the paper "yellow card" the
365 sister-in-law brings with the two twins. Jackson County Health Department staff records the children's names, and the shots they were given. This information is entered into the computer back at the Clinic the next day, and submitted to the regional IIS.

At this point, even though both children's names were misspelled as "Lane" and "Lanna", the Immunization Registry was again able to recognize that the records belonged to twins rather than
370 the same person because, although the demographic data was almost identical, the Last Update

Date/Time were very close (Date was the same) and Last Update Facility indicated the same clinic. Unfortunately, they didn't write down the mother's information at the Health Fair, but recorded her sister-in-laws name and address instead, so the Immunization Registry was not able to automatically link this new information to the information it already had for "Lalainne" and

375   "Lalannie".

Other Possibilities:

A better outcome could have happened if the clinic had recorded any one of several different data elements that would have helped tie this new data to the previous data. Any one of the Mothers Maiden Name (even the Mother's First Name component), the Home Phone Number, or

380   the unique identifier for the kids which was printed on the "yellow card" from Pediatric Healthcare would have helped.

2.2.2 PDQ Integration Profile Changes

Update TF Vol. 1 Section 8.1 Patient Demographics Query Integration Profile Options line 1201 as follows:

385   # X.2 Patient Demographics Query Integration Profile Options

Options that may be selected for this Integration Profile are listed in the table 8.2-1 along with the actors to which they apply. Dependencies between options when applicable are specified in notes.

Table X.2-1 Patient Demographics Query - Actors and Options

Actor	Options	Vol & Section
Patient Demographics Consumer	Patient Demographics and Visit Query	ITI TF-2a: 3.22
	Pediatric Demographics	**ITI TF-1: 8.2.2**
Patient Demographics Supplier	Patient Demographics and Visit Query	ITI TF-2a: 3.22
	Pediatric Demographics	**ITI TF-1: 8.2.2**

390   *Create new section TF Vol. 1 Section 8.2.1 Patient Demographics Query Profile Options line 1424 as follows:*

8.2.2 Pediatric Demographics

The experience of immunization registries and other public health population databases has shown that retrieving patient records for an individual person in environments with large

395   proportions of pediatric records requires additional demographic data.

Information about the mother of the patient or a household telephone number is helpful in retrieving records in large population databases where data quality may be uneven.

Certain other demographics fields are important to include in the query response as they may be used by the Patient Demographics Consumer in verifying the identity of the patient, in particular,

400   they aid in distinguishing records for twins, triplets, and so forth.

Pediatric Demographics makes use of the following six additional demographic fields to aid record matching in databases with many pediatric records.

Field	Reason for inclusion	Value
Mother's Maiden Name	Any information about the mother is helpful in making a match	Helps create true positive matches
Patient Home Telephone	A telecom helps match into the right household	Helps create true positive matches
Patient Multiple Birth Indicator	Indicates this person is a multiple - twin, triplet, etc.	Helps avoid false positive matches of multiples
Patient Birth Order	Distinguishes among those multiples.	Helps avoid false positive matches of multiples
Last Update Date/Time, Last Update Facility	These fields, although not strictly demographic, can effectively substitute when multiple birth indicator and birth order are not collected. They indirectly provide visit information. Provider visits on the same day may likely indicate two children brought to a doctor together.	Helps avoid false positive matches of multiples

Patient Demographics Consumer actors which support the Pediatrics Demographics option will
405 be able to provide Pediatric Demographics query parameter fields in the Patient Demographics
Query transaction [ITI-21], and shall be able to receive and process any values returned for the
fields identified as Pediatric Demographics.

Patient Demographics Supplier actors which support the Pediatrics Demographics option will be
able to match on values provided for any Pediatric Demographics fields in the Patient
410 Demographics Query transaction [ITI-21]. and shall return values, when available, for the fields
identified as Pediatric Demographics.

Pediatric Demographics query parameter fields are:

- Mother's Maiden Name
- Patient Home Telephone

415 Pediatric Demographics are defined as all of the following:

- Mother's Maiden Name
- Patient Home Telephone
- Patient Multiple Birth Indicator
- Patient Birth Order
420 - Last Update Date/Time
- Last Update Facility

2.2.3 PIXV3 Integration Profile Changes

425

X.2 Patient Identifier Cross-referencing HL7 V3 Integration Profile Options

Options that may be selected for this Integration Profile are listed in the Table X.2-1 along with the Actors to which they apply. Dependencies between options when applicable are specified in
430   notes.

Table X.2-1 Patient Identifier Cross-referencing HL7 V3 - Actors and Options

Actor	Options	Vol & Section
Patient Identity Source	~~No options defined~~ **Pediatric Demographics**	– **ITI TF-1: X.2.2**
Patient Identifier Cross-reference Manager	~~No options defined~~ **Pediatric Demographics**	– **ITI TF-1: X.2.2**
Patient Identifier Cross-reference Consumer	PIXV3 Update Notification Transaction	ITI TF-2: 3.46

Create new section TF Vol. 1 Section X.2.2 Patient Identifier Cross-referencing HL7 V3 Integration Profile Options as follows:

Y.2.2 Pediatric Demographics

435   The experience of immunization registries and other public health population databases has shown that matching and linking patient records from different sources for the same individual person in environments with large proportions of pediatric records requires additional demographic data.

In particular, distinguishing records for children who are twins, triplets, etc. – that is, avoiding
440   false positive matches - may be difficult because much of the demographic data for the two individuals matches.   For instance, twin children may have identical last names, parents, addresses, and dates of birth; their first names may be very similar, possibly differing by only one letter. It can be very difficult for a computer or even a human being to determine in this situation whether the slight first name difference points to two distinct individuals or just a
445   typographical error in one of the records.   Additional information is extremely helpful in making this determination.

Pediatric Demographics makes use of the following six additional demographic fields to aid record matching in databases with many pediatric records.

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Patient Multiple Birth Indicator	Indicates this person is a multiple - twin, triplet, etc.	Helps avoid false positive matches of multiples
Patient Birth Order	Distinguishes among those multiples.	Helps avoid false positive matches of multiples
Last Update Date/Time, Last Update Facility	These fields, although not strictly demographic, can effectively substitute when multiple birth indicator and birth order are not collected. They indirectly provide visit information. Provider visits on the same day may likely indicate two children brought to a doctor together.	Helps avoid false positive matches of multiples

450 Patient Identity Source actors which support the Pediatric Demographics option shall provide values, when available, for the fields identified as Pediatric Demographics.

Patient Identifier Cross-reference Manager Actors which support the Pediatric Demographics option shall consider the Pediatric Demographics fields as part of their matching algorithm if values for one or more of these fields were provided in the Patient Identity Feed.

455 Pediatric Demographics are defined as all of the following:

- Mother's Maiden Name
- Patient Home Telephone
- Patient Multiple Birth Indicator
- Patient Birth Order
460
- Last Update Date/Time
- Last Update Facility

2.2.4 PDQV3 Integration Profile Changes

Update PIX PDQ HL7v3 Supplement Section Y.2 Patient Demographics Query Integration Profile Options as follows: (Note actual section is currently 3.2 but needs to be fixed via CP to use profile
465 *number in the section number)*

Y.2 Patient Demographics Query HL7 V3 Integration Profile Options

Options that may be selected for this Integration Profile are listed in the table Y.2-1 along with the actors to which they apply. Dependencies between options when applicable are specified in
470 notes.~~There are no options currently specified for this profile.~~

> Note that unlike the PDQ profile there is no transaction which corresponds to the Patient Demographics and Visit query (ITI-22).

475 **Table Y.2-1 Patient Demographics Query HL7 V3 - Actors and Options**

Actor	Options	Vol & Section
Patient Demographics Consumer	No options defined	--
	Pediatric Demographics	**ITI TF-1: Y.2.2**
Patient Demographics Supplier	~~No options defined~~	**–**
	Pediatric Demographics	**ITI TF-1: Y.2.2**

Create new section TF Vol. 1 Section Y.2.2 Patient Demographics Query HL7 V3 Integration Profile Options as follows:

Y.2.2 Pediatric Demographics

The experience of immunization registries and other public health population databases has
480 shown that retrieving patient records for an individual person in environments with large
proportions of pediatric records requires additional demographic data.

Information about the mother of the patient or a household telephone number is helpful in
retrieving records in large population databases where data quality may be uneven.

Certain other demographics fields are important to include in the query response as they may be
485 used by the Patient Demographics Consumer in verifying the identity of the patient, in particular,
they aid in distinguishing records for twins, triplets, and so forth.

Pediatric Demographics makes use of the following six additional demographic fields to aid
record matching in databases with many pediatric records.

Field	Reason for inclusion	Value
Mother's Maiden Name	Any information about the mother is helpful in making a match	Helps create true positive matches
Patient Home Telephone	A telecom helps match into the right household	Helps create true positive matches
Patient Multiple Birth Indicator	Indicates this person is a multiple - twin, triplet, etc.	Helps avoid false positive matches of multiples
Patient Birth Order	Distinguishes among those multiples.	Helps avoid false positive matches of multiples
Last Update Date/Time, Last Update Facility	These fields, although not strictly demographic, can effectively substitute when multiple birth indicator and birth order are not collected. They indirectly provide visit information. Provider visits on the same day may likely indicate two children brought to a doctor together.	Helps avoid false positive matches of multiples

490   Patient Demographics Consumer actors which support the Pediatrics Demographics option will
be able to provide Pediatric Demographics query parameter fields in the Patient Demographics
Query HL7 V3 transaction [ITI-47], and shall be able to receive and process any values returned
for the fields identified as Pediatric Demographics.

Patient Demographics Supplier actors which support the Pediatrics Demographics option will be
495   able to match on values provided for any Pediatric Demographics fields in the Patient
Demographics Query HL7 V3 transaction [ITI-47] and shall return values, when available, for
the fields identified as Pediatric Demographics.

Pediatric Demographics applicable in the query request are:

- Mother's Maiden Name
500   - Patient Home Telephone

Pediatric Demographics are defined as all of the following:

- Mother's Maiden Name
- Patient Home Telephone
- Patient Multiple Birth Indicator
505   - Patient Birth Order
- Last Update Date/Time
- Last Update Facility

Volume 2a - Transactions

510 | *Update TF Vol. 2a Section 3.21 Patient Demographics Query, Section 3.21.4.1.2.2.1 Message Semantics, lines 5262 through 5263 as follows. Note that CP-ITI-277 changes line 5264 of this same section.*

The Patient Demographics Consumer may specify, and the Patient Demographics Supplier shall
~~support~~, **use as search parameters**, the fields in ~~the following table~~ **Table 3.21-3. If the**
515 **Pediatric Demographics option is supported, then additionally, the Patient Demographics**
Consumer may specify, and the Patient Demographics Supplier shall support, the fields in
Table 3.21-4.

520 | *Update TF Vol. 2a Section 3.21 Patient Demographics Query, Section 3.21.4.1.2.2.1 Message Semantics, by inserting the following new table 3.21-4 at line 5268 as follows.*

**Table 3.21-4. PDQ Profile – QPD-3 fields required to be additionally supported if the
Pediatric Demographic Option is supported**

FLD	ELEMENT NAME
PID.6	Mother's Maiden Name
PID.13	Phone Number - Home

525

Update TF Vol. 2a Section 3.21 Patient Demographics Query, Section 3.21.4.2.2.5 Message Semantics, by inserting the following text at line 5425 as follows.

The Supplier shall return the attributes within the PID segment as specified in Table 3.21-8. **If**
530 **the Pediatric Demographics option is supported, then additionally, the Supplier shall**
return the attributes within the PID segment as specified in Table 3.21-9. In addition, the
Patient Demographics Supplier Actor shall return all other attributes within the PID segment for
which it is able to supply values.

535 | *Update TF Vol. 2a Section 3.21 Patient Demographics Query, Section 3.21.4.2.2.5 Message Semantics, by inserting the following new table 3.21-9 at line 5430 as follows.*

Table 3.21-9. PDQ Profile, Patient DemographicsOption - PID segment

SEQ	LEN	DT	OPT	TBL#	ITEM#	ELEMENT NAME
6	250	XPN	R2		00109	Mother's Maiden Name
13	250	XTN	R2		00116	Phone Number - Home
24	1	ID	R2	0136	00127	Multiple Birth Indicator

25	2	NM	R2		00128	Birth Order
33	26	TS	R2		01537	Last Update Date/Time
34	241	HD	R2		01538	Last Update Facility

540 *Update TF Vol. 2a Section 3.22 Patient Demographics and Visit Query, Section 3.22.4.1.2.2.1 Message Semantics, lines 4454 as follows. Note that CP-ITI-277 may change line 5719 of this same section.*

The Patient Demographics Consumer may specify, and the Patient Demographics Supplier shall support, the fields in ~~the following table~~ **Table 3.22-3. If the Pediatric Demographics option**
545 **is supported, then additionally, the Patient Demographics Consumer may specify, and the Patient Demographics Supplier shall support, the fields in Table 3.22-4.**

Update TF Vol. 2a Section 3.22 Patient Demographics and Visit Query, Section 3.22.4.1.2.2.1 Message Semantics, by inserting the following text and new table 3.22-4 at line 5724 as follows.

550

Table 3.22-4. PDQ Profile – QPD-3 fields required to be additionally supported if Pediatric Demographics is supported

FLD	ELEMENT NAME
PID.6	Mother's Maiden Name
PID.13	Phone Number - Home

Update TF Vol. 2a Section 3.22 Patient Demographics and Visit Query, Section 3.22.4.2.2.5 Message
555 *Semantics, by inserting the following text at line 5894 as follows.*

The Supplier shall return the attributes within the PID segment as specified in Table 3.22-8. **If the Pediatric Demographics option is supported, then additionally, the Supplier shall return the attributes within the PID segment as specified in Table 3.22-9.** In addition, the
560 Patient Demographics Supplier Actor shall return all other attributes within the PID segment for which it is able to supply values.

Update TF Vol. 2a Section 3.22 Patient Demographics and Visit Query, Section 3.22.4.2.2.5 Message Semantics, by inserting the following new table 3.22-9 at line 5898 as follows.

565

Table 3.22-9. PDQ Profile, Pediatric Demographics Option - PID segment

SEQ	LEN	DT	OPT	TBL#	ITEM#	ELEMENT NAME
6	250	XPN	R2		00109	Mother's Maiden Name
13	250	XTN	R2		00116	Phone Number - Home
24	1	ID	R2	0136	00127	Multiple Birth Indicator
25	2	NM	R2		00128	Birth Order (within live births)
33	26	TS	R2		01537	Last Update Date/Time
34	241	HD	R2		01538	Last Update Facility

Update Section 3.30.2 in Volume 2b to add the Patient Identity Source and Patient Identifier Cross-Reference Manager actors..

570 **3.30.2 Use Case Roles**
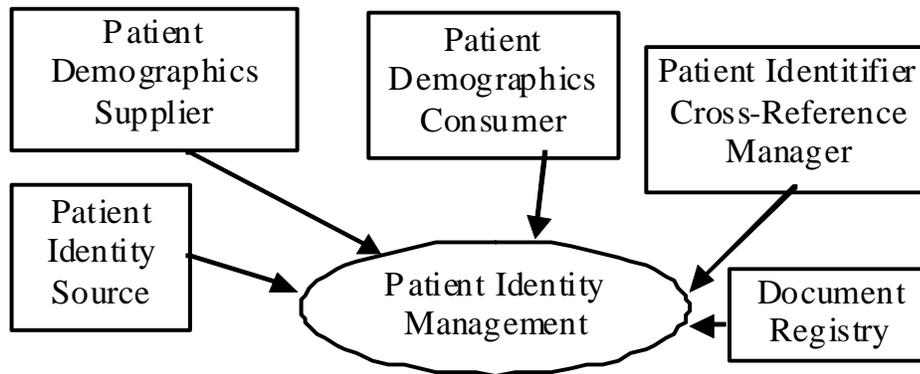
Actor: Patient Demographics Supplier

Role: Adds and modifies patient demographics.

Actor: Patient Demographics Consumer

575 **Role:** Receives patient demographics.

Actor: Patient Identity Source

Role: Adds and modifies patient demographics.

Actor: Patient Identifier Cross-Reference Manager

Role: Receives patient demographics.

580 **Actor: Document Registry**

Role: Receives patient demographics.

585 Transaction ITI-30 supports two options, "Merge" and "Link/Unlink", in order to accommodate the various methods used by healthcare organizations to reconcile duplicated identities.

Any Patient Demographics Supplier or Patient Demographics Consumer actor SHALL support at least one of the two options "Merge" and "Link/Unlink" or both, according to the IHE national extensions of this profile. Any implementation framework will mandate both actors to support

590 the same option.

Transaction ITI-30 also supports the Pediatric Demographics option. Pediatric Demographics makes use of six base fields that are required for record matching by Patient Identity Feed [ITI-8] (See ITI TF-2a: 3.8.4.1.3) and Patient Demographics Query [ITI-21] (See ITI TF-2a: 3.21.4.2.2.5), and six additional demographic fields to aid record matching in databases with

595 many pediatric records.

The six base fields are:

- Patient Identifier List
- Patient Name
- Date/Time of Birth
600 - Administrative Sex
- Patient Address
- Patient Account Number

The six additional Pediatric Demographics fields, and reasons for their inclusion, are given in Table 3.30.4-1.

605 **Table 3.30.4-1 : Pediatric Demographics Fields**

Field	Reason for inclusion	Value
Mother's Maiden Name	Any information about the mother is helpful in making a match	Helps create true positive matches
Patient Home Telephone	A telecom helps match into the right household	Helps create true positive matches
Patient Multiple Birth Indicator	Indicates this person is a multiple - twin, triplet, etc.	Helps avoid false positive matches of multiples
Patient Birth Order	Distinguishes among those multiples.	Helps avoid false positive matches of multiples
Last Update Date/Time, Last Update Facility	These fields, although not strictly demographic, can effectively substitute when multiple birth indicator and birth order are not collected. They indirectly provide visit information. Provider visits on the same day may likely indicate two children brought to a doctor together.	Helps avoid false positive matches of multiples

Add Section 3.30.4.3 Optionality of Pediatric Demographics Fields to Volume 2b at line 5093 to describe the field optionality of the Pediatric Demographics option..

610 The Pediatric Demographics option does not require Patient Identity Source Actors to include any attributes not already required by the corresponding HL7 message (as is described in the following sections). This minimal set of requirements enables inclusion of the largest range of Patient Identity Source Actor systems.

The Pediatric Demographics option does place additional requirements on the Patient Identifier Cross-reference Manager actor, requiring it to accept a set of HL7 attributes beyond what is required by HL7. See Table 3.30.4.3-1 for a description of these additional requirements.

615

Table 3.30.4-2 : Optionality of Pediatric Demographics Fields

Transaction	Patient Identity Management [ITI-30] with Pediatric Demographics	
Actor	Patient Identity Source (per HL7 2.5 standard)	Patient Identifier Cross-Reference Manager
Base fields:		
Patient Identifier List	R	R
Patient Name	R	R
Date/Time of Birth	O	R2
Administrative Sex	O	R2
Patient Address	O	R2
Patient Account Number	O	O
Pediatric Demographics fields:		
Mother's Maiden Name	O	R2
Patient Home Telephone	O	R2
Patient Multiple Birth Indicator	O	R2
Patient Birth Order	O	R2
Last Update Date/Time	O	R2
Last Update Facility	O	R2

620 *Update TF Vol. 2b Section 3.30 Patient Identity Management [ITI-30], Section 3.30.5.3 PID – Patient Identification Segment, by modifying table 3.30-3 at line 5205 as follows. Yellow highlighting only calls attention to changes but should not be transferred into the document text.*

Table 3.30-3 PID - Patient Identification segment

SEQ	LEN	DT	Usage	Card.	TBL#	ITEM#	Element name
1	4	SI	O	[0..1]		00104	Set ID - PID
2	20	CX	X	[0..0]		00105	Patient ID
3	250	CX	R	[1..*]		00106	Patient Identifier List

SEQ	LEN	DT	Usage	Card.	TBL#	ITEM#	Element name
4	20	CX	X	[0..0]		00107	Alternate Patient ID - PID
5	250	XPN	R	[1..*]		00108	Patient Name
6	250	XPN	O (*Note 1*)	[0..1]		00109	Mother's Maiden Name
7	26	TS	CE (*Note 1*)	[0..1]		00110	Date/Time of Birth
8	1	IS	CE (*Note 1*)	[1..1]	0001	00111	Administrative Sex
9	250	XPN	X	[0..1]		00112	Patient Alias
10	250	CE	O	[0..1]	0005	00113	Race
11	250	XAD	CE (*Note 1*)	[0..*]		00114	Patient Address
12	4	IS	X	[0..1]	0289	00115	County Code
13	250	XTN	O (*Note 1*)	[0..*]		00116	Phone Number - Home
14	250	XTN	O	[0..*]		00117	Phone Number - Business
15	250	CE	O	[0..1]	0296	00118	Primary Language
16	250	CE	O	[0..1]	0002	00119	Marital Status
17	250	CE	O	[0..1]	0006	00120	Religion
18	250	CX	O	[0..1]		00121	Patient Account Number
19	16	ST	X	[0..1]		00122	SSN Number - Patient
20	25	DLN	X	[0..1]		00123	Driver's License Number - Patient
21	250	CX	O	[0..*]		00124	Mother's Identifier
22	250	CE	O	[0..1]	0189	00125	Ethnic Group
23	250	ST	O	[0..1]		00126	Birth Place
24	1	ID	O (*Note 1*)	[0..1]	0136	00127	Multiple Birth Indicator
25	2	NM	O (*Note 1*)	[0..1]		00128	Birth Order
26	250	CE	O	[0..1]	0171	00129	Citizenship
27	250	CE	O	[0..1]	0172	00130	Veterans Military Status
28	250	CE	X	[0..0]	0212	00739	Nationality
29	26	TS	C	[0..1]		00740	Patient Death Date and Time
30	1	ID	C	[0..1]	0136	00741	Patient Death Indicator
31	1	ID	CE	[0..1]	0136	01535	Identity Unknown Indicator
32	20	IS	CE	[0..*]	0445	01536	Identity Reliability Code
33	26	TS	CE (*Note 1*)	[0..1]		01537	Last Update Date/Time
34	241	HD	O (*Note 1*)	[0..1]		01538	Last Update Facility
35	250	CE	CE	[0..1]	0446	01539	Species Code
36	250	CE	C	[0..1]	0447	01540	Breed Code
37	80	ST	O	[0..1]		01541	Strain

SEQ	LEN	DT	Usage	Card.	TBL#	ITEM#	Element name
38	250	CE	O	[0..2]		01542	Production Class Code
39	250	CWE	O	[0..*]		01840	Tribal Citizenship

625

Note 1: If the Pediatric Demographics Option is supported, this element in the table above shall be R2 for the Patient Identifier Cross-Reference Manager Actor.

Update Section 3.30.5.3 in Volume 2b to add another Identifier Type Code for PID-3 to the suggested values beginning on line 5321.

BR   Birth Certificate number. Assigning authority is the birth state or national
630   government that issues the Birth Certificate.

Update Section 3.30.5.3 in Volume 2b to add PID-6 Mothers Maiden Name on line 5333.

PID-6 – Mother's Maiden Name (XPN), conditional:

Condition predicate:

635   This field is required if known for the Pediatrics Demographic Option. It serves to help link records when other demographic data and search criteria are not exactly the same.

Update Section 3.30.5.3 in Volume 2b to add PID-13 Home Phone Number on line 5333

PID-13 – Home Phone Number (XTN), conditional.

640   Condition predicate:

This field is required if known for the Pediatrics Demographic Option. It serves to help locate records when other demographic data and search criteria are not exactly the same.

Update Section 3.30.5.3 in Volume 2b to add PID-24 Multiple Birth Indicator on line 5367

645   PID-24 – Multiple Birth Indicator (ID), conditional.

Condition predicate:

This field is required if known for the Pediatrics Demographic Option. It serves to help avoid linking records for twins, which are often nearly identical.

---

650   *Update Section 3.30.5.3 in Volume 2b to add PID-25 Birth Order on line 5367*

PID-25 – Birth Order (NM), conditional.

Condition predicate:

This field is required if known for the Pediatrics Demographic Option. It serves to help avoid linking records for twins, which are often nearly identical.

655

Update Section 3.30.5.3 in Volume 2b to modify PID-33 Last Update Date/Time on line 5405.

PID-33 – Last Update Date/Time (TS), conditional.

Condition predicate:

660 This field is required if available (i.e., known to the sender) in the following messages: Creation of a new patient (A28 in ITI-30), inpatient admitted (A01 in ITI-31), registration of an outpatient (A04 in ITI-31), update patient demographics (A31 in ITI-30), update patient demographics in the context of an encounter (A08 in ITI-31).

In the cases of messages A08 and A31, the content of this field is equal to the value in EVN-6-
665 event occurred.

> Note: This field is required if known for the Pediatrics Demographic option. The condition predicate above satisfies this requirement. It serves to help avoid linking records for twins, which are often nearly identical. It is used in conjunction with PID-34.

670 *Update Section 3.30.5.3 in Volume 2b to add PID-34 Last Update Facility on line 5405*

PID-34 – Last Update Facility (HD), conditional.

Condition predicate:

This field is required if known for the Pediatrics Demographic option. It serves to help avoid linking records for twins, whose records are often nearly identical, when used in conjunction
675 with PID-33.

Supplement 2008-2009

Changes to Patient Identifier Cross-Reference HL7 V3 (PIXV3) and Patient Demographic Query HL7 V3 (PDQV3)

680 | *Update Patient Identifier Cross-Reference HL7 V3 (PIXV3) and Patient Demographic Query HL7 V3 (PDQV3)..*

Volume 2b – Transactions

Update Volume 2b – Transactions...

3.47 Patient Demographic Query HL7 V3

685 | *Update 3.47.4.1.2 Message Semantics. Modify lines 1748 through 1750 by adding a sentence to the end of the paragraph as given below.*

The components of the Patient Registry Query by Demographics message with cardinality greater than 0 (as shown below) are required, and the detailed description of the message is provided in ITI TF-2b: 3.47.4.1.2.1 to 3.47.4.1.2.4. **Additional components to be included if**
690 **the Pediatric Demographics option is supported are also indicated in ITI TF-2b: 3.47.4.1.2.1 to 3.47.4.1.2.4.**

Update 3.47.4.1.2.1 Major Components of the Patient Registry Query by Demographics. Add the following text after line 1787 (at the end of the section). Keep parameter titles in bold to stay consistent
695 | *with surrounding text.*

Additional components to be included if the Pediatric Demographics option is supported are also indicated below:

MothersMaidenName Parameter

700 This optional parameter specifies the maiden name of the mother of the person whose information is being queried. For this parameter item, a single person name (PN) data item shall be specified in the Person.value attribute. Within the PN data type, the given name and family name may be specified. If the sender needs to indicate that the name parts specified are not limited to an exact match, then the *use* attribute of the *value* element shall be set to "SRCH".

705 PatientTelecom Parameter

This optional parameter specifies the primary telephone number or email address of the person whose information is being queried.

Update 3.47.4.1.2.2 Message Information Model of the Patient Registry Query by Demographics
710 | *Message. Modify line 1790 through 1794 as follows:*

Below is the Message Information Model for the Query by Demographics message, as restricted for this transaction. The purpose of the model is to describe the data elements relevant for this transaction. It is a strict subset of the *Patient Registry Query by Demographics (PRPA_RM201306UV) RMIM.* **If the Pediatric Demographics option is supported, there are**
715 **somewhat fewer constraints on the RMIM; these are also indicated.**

Modify line 1813 as follows:

- ~~PatientTelecom~~

- **PatientTelecom (not omitted if Pediatric Demographics option is supported)**

720

Modify line 1816 as follows:

- ~~MothersMaidenName~~

- **MothersMaidenName (not omitted if Pediatric Demographics option is supported)**

725

NOTE TO EDITOR: Modify the RMIM diagram of Figure 3.47.4.1.211(which should possibly be labeled as "Figure 3.47.4.1.2-1"?) as follows. Add the boxes for MothersMaidenName and PatientTelecom back in, changing cardinality to 1 as was done for LivingSubjectName, LivingSubjectAdministrativeGender, and so forth; that is, change 0..* to 0..1 and remove SET<> from the value line. Indicate that these are
730 *included only when the Pediatric Demographics option is supported.*

The source RMIM is found at:

http://www.hl7.org/v3ballot/html/domains/uvpa/editable/PRPA_RM201306UV.htm

---

735 *Modify Table 3.47.4.1.2-1 as follows. Add the following rows for MothersMaidenName and PatientTelecom back in, with cardinality changed to 1 as is done below. Indicate that these are included only when the Pediatric Demographics option is supported.*

MothersMaidenName	*Design Comments:* This query parameter is the maiden name of a focal person's mother. It is included as a parameter because it is a common attribute for confirming the identity of persons in some registries. This parameter does not map to a single RIM attribute, instead, in RIM terms Mother's maiden name is the person name part of "family" with an EntityNamePartQualifier of "birth" for the person who is the player in a PersonalRelationship of type of "mother" to the focal person.
value [1..1] ParameterItem (PN)	*Design Comments:* A person name. In this case it may consist of only the given name part, the family name part, or both.
semanticsText [1..1] ParameterItem (ST){default= "Person.MothersMaidenName"}	

PatientTelecom	*Design Comments:* This query parameter is a telecommunications address for communicating with a living subject in the context of the target patient registry. It could be a telephone number, fax number or even an email address.
value [1..1] ParameterItem (TEL)	*Design Comments:* A telecommunications address. The scheme attribute specifies whether this is a telephone number, fax number, email address, etc.
semanticsText [1..1] ParameterItem (ST){default= "Patient.telecom"}	

740