

Integrating the Healthcare Enterprise



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IHE IT Infrastructure (ITI) Technical Framework Supplement 2008-2009

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Pediatric Demographics

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Draft for Trial Implementation
August 22, 2008

1 Foreword

20 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
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
25 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
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
30 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.
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.

35 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
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
40 European Congress of Radiologists (ECR), the Coordination Committee of the Radiological and
Electromedical Industries (COCIR), Deutsche Röntgengesellschaft (DRG), the EuroPACS
Association, Groupement pour la Modernisation du Système d'Information Hospitalier
(GMSIH), Société Française de Radiologie (SFR), Società Italiana di Radiologia Medica
(SIRM), the European Institute for health Records (EuroRec), and the European Society of
45 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
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
50 Medical Informatics (JAMI). Other organizations representing healthcare professionals are
invited to join in the expansion of the IHE process across disciplinary and geographic
boundaries.

The IHE Technical Frameworks for the various domains (IT Infrastructure, Cardiology,
Laboratory, Radiology, etc.) defines specific implementations of established standards to achieve
55 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
through the identification and correction of errata. The current version for these Technical
Frameworks may be found at www.ihe.net/Technical_Framework.

60 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
depth. The volume I provides a high-level view of IHE functionality, showing the transactions
65 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 through May 2009.**

70 **Comments and change proposals arising from Trial Implementation may be
submitted to <http://forums.rsna.org> under the forum:
“Integrating the Healthcare Enterprise”
Select the sub-forum:
*“IHE IT Infrastructure 2008 Supplements for Trial Implementation”***

75 **The IHE IT Infrastructure Technical Committee will address these comments resulting
from implementation, Connectathon testing, and demonstrations. Final text is expected to
be published in June 2009, dependent upon results of IHE validation process.**

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Replace Section X.X by the following:

100 **2 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 person in environments with large proportions of pediatric records requires additional demographic data.

105 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 one letter. It can be very difficult for a computer or even a human being to determine in this
 110 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 the patient or a household telephone number is also helpful in matching records in large population databases where data quality may be uneven.

115 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	Helps avoid false positive matches of multiples

	<p>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.</p>	
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120 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 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.

- 125 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 record against known records.
- 130 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 matches.
- 135 4. In addition, in HL7 Version 3, the last two fields are treated as Control Act Wrapper fields rather than demographic fields.

140 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 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].

145 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 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 candidate matches (as in Patient Demographics Query), but all are important as part of the values returned (as facilitated by Patient Demographics Query Response).

150 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 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
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

160 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 the use of search fields by PDQ, and renaming ITI-30 as “Patient Identity Management” to distinguish it from ITI-8 “Patient Identity Feed”.

2.1 Open Issues and Questions

- 165 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 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 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.
- 170
- 175 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 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.
- 180

2.2 Closed Issues

- 185 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 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 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
- 190

- 195 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
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
200 children, often records for twins have similar demographics, which can result in a
false match.
 - 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
205 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
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
210 Update Date/Time above.
 - 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).
- 215 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
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
- 220 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.
- 225 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
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
230 on Patient Demographics Query has been reinserted in this draft.
6. We discussed HITSP requirements to include National Vaccine Advisory Committee (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).

235 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 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.

240 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.

- 245
- 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
- 250
- 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.

255 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

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

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**

265 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:

5.1 Actors/Transactions

270 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.

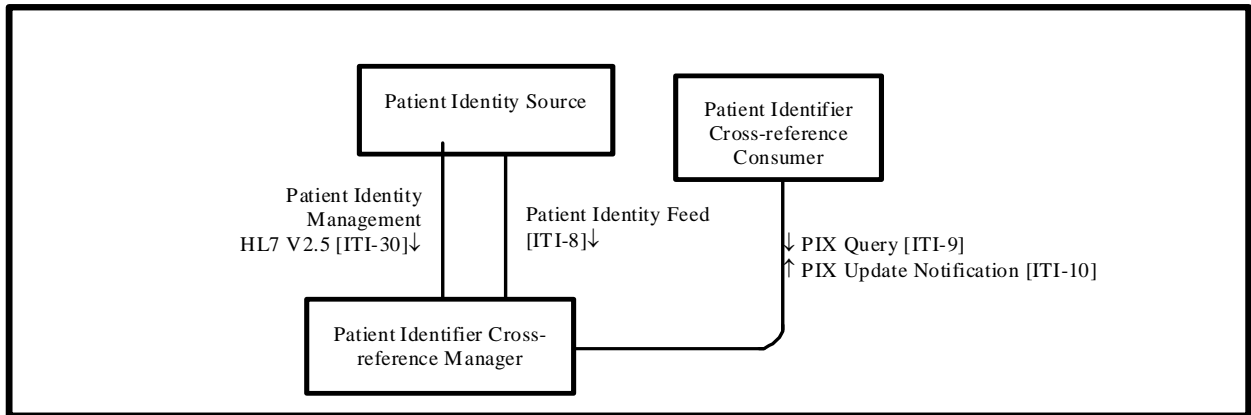


Figure 5.1-1 Patient Identifier Cross-referencing Actor Diagram

275 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 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.

280 *Update TF Vol. 1 Section 5.1 table 5.1-1 line 953 as follows:*

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

Actors	Transactions	Optional ity	Section in Volume 2
Patient Identity Source	Patient Identity Feed[ITI-8]	R	ITI TF-2: 3.8
	<u>Patient Identity Management [ITI-30]</u>	<u>O</u>	<u>ITI TF-2: 3.30</u>
Patient Identifier Cross-reference Consumer	PIX Query[ITI-9]	R	ITI TF-2: 3.9
	PIX Update Notification[ITI-10]	O	ITI TF-2: 3.10
Patient Identifier Cross-reference Manager	Patient Identity Feed[ITI-8]	R	ITI TF-2: 3.8
	<u>Patient Identity Management [ITI-30]</u>	<u>O</u>	<u>ITI TF-2: 3.30</u>
	PIX Query[ITI-9]	R	ITI TF-2: 3.9
	PIX Update Notification[ITI-10]	R	ITI TF-2: 3.10

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

5.2 Patient Identifier Cross-referencing Integration Profile Options

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.

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

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

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

5.2.1 Pediatric Demographics

295 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.

300 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

305 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 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.

<u>Field</u>	<u>Reason for inclusion</u>	<u>Value</u>
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

310

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.

315

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:

320

- Mother’s Maiden Name
- Patient Home Telephone

- Patient Multiple Birth Indicator
- Patient Birth Order
- Last Update Date/Time
- Last Update Facility

325

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
- 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.

330

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

5.3.3 Pediatric Demographic Option Use Cases

335 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

340

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 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.

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

345

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 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.

350

5.3.3.3 Use Case: Minimal Demographic Feed from a Health Fair

355

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

360 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.

365 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 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 “Lalannie”.

370 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 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:

8.2 Patient Demographics Query Integration Profile Options

380 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 8.2-1 Patient Demographics Query - Actors and Options

Actor	Options	Vol & Section
Patient Demographics Consumer	Patient Demographics and Visit Query <u>Pediatric Demographics</u>	ITI TF-2: 3.22 <u>ITI TF-1: 8.2.2</u>
Patient Demographics Supplier	Patient Demographics and Visit Query <u>Pediatric Demographics</u>	ITI TF-2: 3.22 <u>ITI TF-1: 8.2.2</u>

385 *Create new section TF Vol. 1 Section 8.2.2 Patient Demographics Query Profile Options line 1206 as follows:*

8.2.2 Pediatric Demographics

390 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 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.

395 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, 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

400

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 transaction [ITI-21], and shall be able to receive and process any values returned for the fields identified as Pediatric Demographics.

405 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

Demographics Query transaction [ITI-21]. and shall return values, when available, for the fields identified as Pediatric Demographics.

Pediatric Demographics query parameter fields are:

- 410
- Mother’s Maiden Name
 - Patient Home Telephone

Pediatric Demographics are defined as all of the following:

- 415
- Mother’s Maiden Name
 - Patient Home Telephone
 - Patient Multiple Birth Indicator
 - Patient Birth Order
 - Last Update Date/Time
 - Last Update Facility

420 **2.2.3 PIXV3 Integration Profile Changes**

Update PIX PDQ HL7v3 Supplement Section X.2 Patient Identifier Cross-referencing HL7 V3 Integration Profile Options as follows: (Note actual section is currently 2.2 but needs to be fixed via CP to use profile number in the section number)

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 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	– <u>ITI TF-1: X.2.2</u>
Patient Identifier Cross-reference Manager	No options defined Pediatric Demographics	– <u>ITI TF-1: X.2.2</u>
Patient Identifier Cross-reference Consumer	PIXV3 Update Notification Transaction	ITI TF-2: 3.46

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

X.2.2 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

435 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,
 440 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.

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Field	Reason for inclusion	Value
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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

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
- Last Update Date/Time
- Last Update Facility

460

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 number in the section number)

465

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 notes. ~~There are no options currently specified for this profile.~~

470

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

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

475

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

Y.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 proportions of pediatric records requires additional demographic data.

480

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.

485 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, 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.

495 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 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
- Patient Home Telephone

500 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 2 - Transactions

510 *Update TF Vol. 2 Section 3.21 Patient Demographics Query, Section 3.21.4.1.2 Message Semantics, lines 4018 through 4019 as follows. Note that CP-ITI-277 changes line 4020 of this same section.*

515 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 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. 2 Section 3.21 Patient Demographics Query, Section 3.21.4.1.2 Message Semantics, by inserting the following new table 3.21-4 at line 4023 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. 2 Section 3.21 Patient Demographics Query, Section 3.21.4.2.2 Message Semantics, by inserting the following text at line 4183 as follows.*

530 The Supplier shall return the attributes within the PID segment as specified in Table 3.21-8. **If the Pediatric Demographics option is supported, then additionally, the Supplier shall return the attributes within the PID segment as specified in Table 3.21-9.** 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. 2 Section 3.21 Patient Demographics Query, Section 3.21.4.2.2 Message Semantics, by inserting the following new table 3.21-9 at line 4188 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

Update TF Vol. 2 Section 3.22 Patient Demographics and Visit Query, Section 3.22.4.1.2 Message Semantics, lines 4454 as follows. Note that CP-ITI-277 may change line 4456 of this same section.

540

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 is supported, then additionally, the Patient Demographics Consumer may specify, and the Patient Demographics Supplier shall support, the fields in Table 3.22-4.**

545

Update TF Vol. 2 Section 3.22 Patient Demographics and Visit Query, Section 3.22.4.1.2 Message Semantics, by inserting the following text and new table 3.22-4 at line 4458 as follows.

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

550

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

Update TF Vol. 2 Section 3.22 Patient Demographics and Visit Query, Section 3.22.4.2.2 Message Semantics, by inserting the following text at line 4629 as follows.

555

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 Patient Demographics Supplier Actor shall return all other attributes within the PID segment for which it is able to supply values.

560

Update TF Vol. 2 Section 3.22 Patient Demographics and Visit Query, Section 3.22.4.2.2 Message Semantics, by inserting the following new table 3.22-9 at line 4633 as follows.

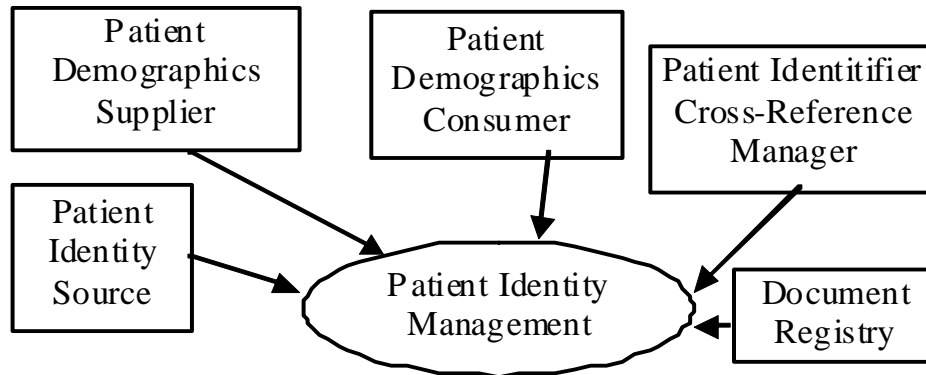
Table 3.22-9. PDQ Profile, Pediatric Demographics Option - PID segment

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

565

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

3.30.2 Use Case Roles



570

Actor: Patient Demographics Supplier
Role: Adds and modifies patient demographics.

Actor: Patient Demographics Consumer
Role: Receives patient demographics.

575

Actor: Patient Identity Source
Role: Adds and modifies patient demographics.
Actor: Patient Identifier Cross-Reference Manager
Role: Receives patient demographics.
Actor: Document Registry

580 **Role: Receives patient demographics.**

Update section 3.30.4 in Volume 2 at line 5088 to describe the Pediatric Demographics option.

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 the same option.

590 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 Section 3.8.4.1.3) and Patient Demographics Query [ITI-21] (See Section 3.21.4.2.2.5), and six additional demographic fields to aid record matching in databases with many pediatric records.

595 The six base fields are:

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

600

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 2 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.

615 The Pediatric Demographics option does place additional requirements on the Patient Identifier Cross-reference Manager and Document Registry Actors, requiring them 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.

Table 3.30.4-2 : Optionality of Pediatric Demographics Fields

Transaction	Patient Identity Management [ITI-30] with Pediatric Demographics	
	Patient Identity Source (per HL7 2.5 standard)	Patient Identifier Cross-Reference Manager and Document Registry
Actor		
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. 2 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.

625

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
4	20	CX	X	[0..0]		00107	Alternate Patient ID - PID
5	250	XPN	R	[1..*]		00108	Patient Name
6	250	XPN	O <i>(Note 1)</i>	[0..1]		00109	Mother's Maiden Name
7	26	TS	CE <i>(Note 1)</i>	[0..1]		00110	Date/Time of Birth
8	1	IS	CE <i>(Note 1)</i>	[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 <i>(Note 1)</i>	[0..*]		00114	Patient Address
12	4	IS	X	[0..1]	0289	00115	County Code
13	250	XTN	O <i>(Note 1)</i>	[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

SEQ	LEN	DT	Usage	Card.	TBL#	ITEM#	Element name
24	1	ID	O <i>(Note 1)</i>	[0..1]	0136	00127	Multiple Birth Indicator
25	2	NM	O <i>(Note 1)</i>	[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 <i>(Note 1)</i>	[0..1]		01537	Last Update Date/Time
34	241	HD	O <i>(Note 1)</i>	[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
38	250	CE	O	[0..2]		01542	Production Class Code
39	250	CWE	O	[0..*]		01840	Tribal Citizenship

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 and the Document Registry Actors.

630 *Update section 3.30.5.3 in Volume 2 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 government that issues the Birth Certificate.

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

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

Condition predicate:

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.

640 *Update section 3.30.5.3 in Volume 2 to add PID-13 Home Phone Number on line 5333*

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

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.

645

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

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

Condition predicate:

650 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.

Update section 3.30.5.3 in Volume 2 to add PID-25 Birth Order on line 5367

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

Condition predicate:

655 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.

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

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

660 Condition predicate:

665 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-event occurred.

670 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.

Update section 3.30.5.3 in Volume 2 to add PID-34 Last Update Facility on line 5405

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

Condition predicate:

- 675 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 with PID-33.

Supplement 2008-2009

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

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

Volume 2 – Transactions

685 *Update Volume 2 – Transactions..*

3.47 Patient Demographic Query HL7 V3

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.

690 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 Sections 3.47.4.1.2.1 to 3.47.4.1.2.4. **Additional components to be included if the Pediatric Demographics option is supported are also indicated in Sections 3.47.4.1.2.1 to 3.47.4.1.2.4.**

695 *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 with surrounding text.*

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

MothersMaidenName Parameter

705 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".

PatientTelecom Parameter

710 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 Message. Modify line 1790 through 1794 as follows:

715 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 somewhat fewer constraints on the RMIM; these are also indicated.**

720

Modify line 1813 as follows:

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

725

Modify line 1816 as follows:

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

730

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 included only when the Pediatric Demographics option is supported.*

735

The source RMIM is found at:

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

740

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	<i>Design Comments:</i> 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)	<i>Design Comments:</i> 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	<i>Design Comments:</i> 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)	<i>Design Comments:</i> 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" }	